

Patrizia DiLucchio • Bruce Sterling • Neil Postman • Carrie Lay



ACCESS TO TOOLS & IDEAS

# WHOLE EARTH

REVIEW

## Privacy Tools

Christian  
Pandevotionalism

## Cancer Self-Care

Tree-Free Paper

Making Health  
Care Work



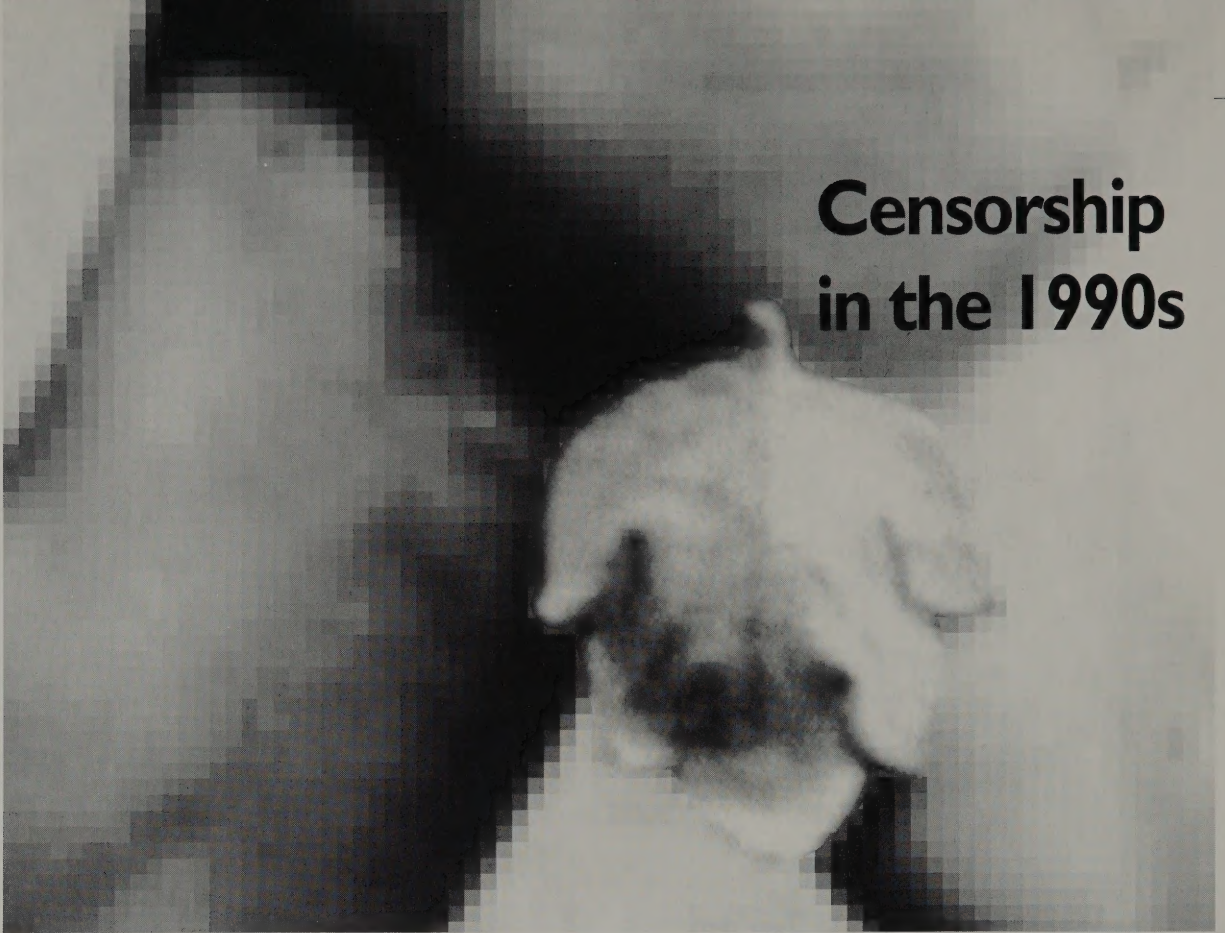
## TREES ARE GOD

**Stephanie Mills:  
Old-growth forest  
in Upper Michigan**

No. 80  
Fall 1993  
\$6.75  
(\$7.50 Canadian)



# Censorship in the 1990s



**W**HAT HAPPENED ON PAGE 93 OF THE LAST ISSUE? And what's the deal with Gossip? We'll deal with Gossip in Gossip. Suffice it to say here that the "censorship" of Gossip was a deliberate joke that took on a different meaning weeks after it was composed.

The censorship of this magazine by its printer, Publishers Press of Louisville, Kentucky, was not a joke, however.

## What happened to Whole Earth Review Issue #79

Stewart Brand was the guest editor. I have to thank Stewart for taking the time to edit an issue, to enable me to finish a book, at the same time that he was trying to finish a book himself. Stewart picked an excerpt for a review of Paul Krassner's *Realist* that truthfully reflected the typical content of the *Realist*. Many people find the *Realist* offensive. The cartoon that was picked is one that many people would find offensive: a caricature of Woody Allen entering Mia Farrow's house, with the caption "Honey, I fucked the kids."

The issue had been in the printer's hands for several days when our art director, Kathleen O'Neill, received a telephone call from a representative of Publishers Press. He said that he had been trying to get in touch with Stewart Brand (who was by then sequestered in a cabin in Northern California, finishing his book on "how buildings learn"). The president of Publishers Press was "suggesting" that we not run the excerpt from the *Realist*. We were scheduled

to go to press in a matter of days. Subsequent conversations with representatives of Publishers Press made it clear that the suggestion was more than a suggestion: the employees of the printer strongly objected to the cartoon and the printer would rather lose our business than print it. Kathleen got in touch with Stewart. Stewart said it was my call. Which it was.

This incident couldn't have happened at a more critical time. We've been losing money for many years and have managed to stay in business even in hard times, but for the past several months our financial projections had been looking even bleaker than usual. At the same time, we had received an attractive offer from HarperSanFrancisco to produce the *Millennium Whole Earth Catalog*.

In the past, fabulous book advances for new editions of the *Whole Earth Catalog* had kept the ship afloat in similar hard times. This was not one of those fabulous advances. The question was whether we could do the *Catalog* without putting the magazine into further jeopardy, not whether the advance for the *Catalog* would solve our cashflow problems. Nevertheless, there was something undeniably attractive about doing this new book. Times have changed since the last big *Catalog*, and the mid-1990s are a crucially important time to get good tools into people's hands. A few million people equipped with tools and knowledge about environmental restoration, privacy protection, sustainable development, independent education, grassroots political action, could do a lot of good right now.

We had spent three weeks working and arguing over every item of a budget that would enable us to do a new *Catalog* without exhausting the already-depleted resources of *WER*. With no funds to do direct-mail solicitation, we saw no other way of gaining new readers for the magazine. We seem to have about 25,000 subscribers at all times; it never drops much under that or grows much larger than that. Those subscribers, and about as many newsstand buyers, aren't sufficiently numerous to keep us alive. *Whole Earth Catalogs*, however, sell in the hundreds of thousands to millions. Doing a *Catalog* was not only a good thing to do, but the best possible scenario for raising awareness of the magazine in the mass media, and thus perhaps helping to boost circulation. And *WER* would benefit from the equipment upgrade that the *Catalog* project required.

Then we got the censorship dilemma thrown in our laps, right when we were trying to decide how to prolong the life of this enterprise we all love so much that we are willing to endure day after day of rancorous budget meetings (and there's nothing so rancorous as the third or fourth meeting over a budget that refuses to balance). After sending bids out to forty printers and going through an evaluation process that took months, we had selected Publishers Press because they provided printing of the quality we require at a price that was \$25,000 below the next-best bidder's yearly charge. Now we had a budget for the *Catalog* project that was trying to balance *and* a possible \$25K liability to the magazine. To say nothing of diverting our energies from the main task.

Here's what the Devil said to me at that moment: "Choose a different excerpt from the *Realist*. This cartoon is not something you are going to be all that proud to wear into court — imagine: "The 'Honey, I Fucked The Kids' Case." Only a few people will know, and no reader will suspect that we've been censored. We can find a new printer at our leisure and get back to the business of creating a *Catalog* and producing *WER*." That definitely would have been an easy way out.

I decided instead to ask the printer to black out the cartoon and print the notice that appeared over the blacked-out space because I wanted our readers to know that this page had been censored by the printer.

It came as a shock to all of us to realize that there are people in the printing business in America who don't understand that censorship is a failure as a solution to social problems, and an insidious attack on the basis of our freedoms as citizens. If we had broken our contract with our printer at that point, our readers would not have had an opportunity to know what happened. The magazine would not have appeared as scheduled, and given our precarious circumstances, there is good reason to expect it might never have appeared again.

We are printing this one last issue with Publishers Press, and we're hunting for a printer who shares our commitment to freedom of expression. We don't know whether we will find a printer we can afford in time to distribute Issue #81 on schedule. If you have any ideas, let us know. The answer to censorship is first to fight it, and then to disseminate the tools for self-publication in all media. That's always been our mission.

—Howard Rheingold

## COMMUNION

### 4 Commanded by Love

*Richard Strozzi Heckler*

### 52 Christian Pandevotionalism

*Daniel Clark*

8 In Search of the Warrior Spirit

• Power at Play

9 Women in Aikido

15 Writing Yourself Home

36 Her Blood is Gold

37 Sacred Eyes • Spirit and Nature

## THE HOLY GROVE

### 32 Michigamme

*Stephanie Mills*

### 38 The Shape of the Universe

*Howard Rheingold*

### 42 Lake and Maple

• Lion and Angel Dividing  
the Maple Between Them

*Jane Hirshfield*

### 44 The Church of the Living Tree

*John Stahl*

### 46 Tree-Free Paper

The New Settler

interviews *John Stahl*

### 48 Hemp for Victory

*Alan E. Mason*

36 Green Man

41 The Fruitful Darkness

56 The Greenpeace Guide to  
Anti-Environmental Organizations

• Native America

57 Guide to the National Wildlife Refuges

• The Southern Forest

## FAMILY

### 10 Legacy

*Carrie Lay*

### 18 Birthright

*Carrie Lay*

14 The Way We Never  
Were • Understanding  
Abusive Families

16 Good Behavior

• Daughters and Mothers

30 Autism & Asperger

Syndrome • The Siege



# WHOLE EARTH

REVIEW

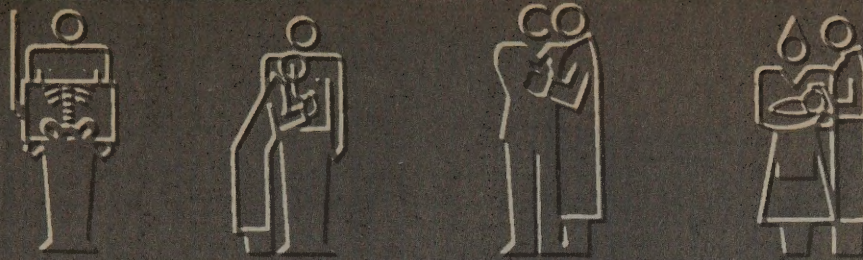
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## HEALTH

### 58 The Health of Humanity

*Larry Brilliant, M.D.*

### 68 High-Tech, High-Cost Health Care

*Toni Martin, M.D.*

### 76 Magnetic Vision

*Bruce Sterling*

### 82 In the Face of the Hurricane

*Survey by Phil Catalfo*

### 84 Scenes from the Life

*Patrizia DiLucchio*

### 88 The Trouble with Health Care

*Patrizia DiLucchio*

### 92 SimHealthCare

*Joe Flower*

### 100 Homeopathic Medicine: A Modern View

*Dana Ullman*

50 Marihuana, the Forbidden Medicine

63 Health and the Rise of Civilization

66 Meaning and Medicine

67 The Antibiotic Paradox

72 Patient Communication for First Responders

74 Before You Call the Doctor  
• Between Heaven and Earth

75 An Illustrated Dictionary of Chinese Medicinal  
Herbs • The Embodied Mind

80 Wrestling with the Angel  
• Living Well with Chronic Illness

81 The Alchemy of Illness  
• The Commonwealth Cancer Help Organization

90 Cancer and Consciousness • Refuge

91 Spontaneous Remission

## TECHNOLOGY, ETC.

### 116 A Privacy Toolkit

*Survey by Robert Luhn*

### 110 The Same Mindless, Stupid Process

*Volker Friedrich interviews Neil Postman*

105 American Ground Zero

115 Great Mambo Chicken  
& the Transhuman Condition

122 Satellite Surveillance • Our Vanishing Privacy

123 Full Disclosure  
• Gray Areas

## GATE FIVE ROAD

129 Finance Report  
• Updates/Correx

130 Supporting  
Subscribers

131 Masthead

132 Gossip

139 Reader Services

140 Unclassifieds

143 Whole Earth  
Bookstore

## COMMUNICATIONS

17 Servas • The Whole World Language Catalog

124 The Whole Internet User's Guide & Catalog  
• The Internet Companion

125 The Information Web  
• The Mac Internet Tour Guide

## DESIGN

99 SchoolStat

106 The Sourcebook for Sustainable Design  
• Retiring Old Cars

107 Redefining Design • Green Products by Design

108 Fein Sander • Hendricksen Floorcovering  
• Screwdriver Redux

109 McNichols Hole Products • Motorless Motion

114 Today Then

126 The Catalog of Catalogs III  
• Jigs, Fixtures and Setups

127 Wind Power for Home & Business  
• Your Mobile Home Energy and Repair Guide

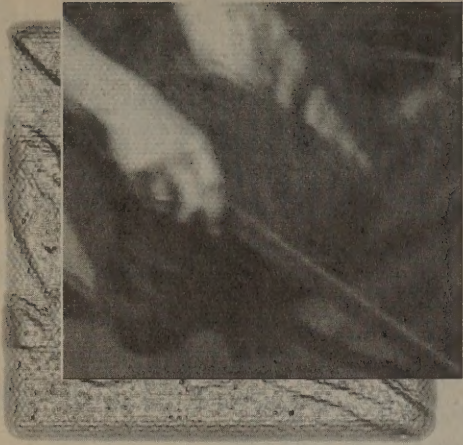
## MUSIC

128 All Music Guide • A Meeting By the River  
• The Life and Legend of Leadbelly

### COVER:

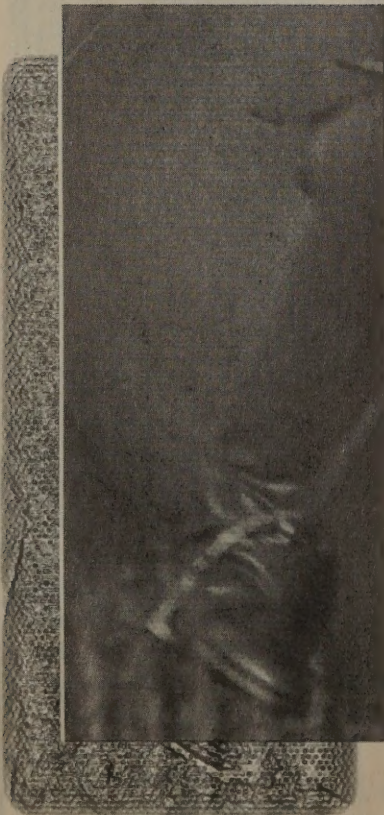
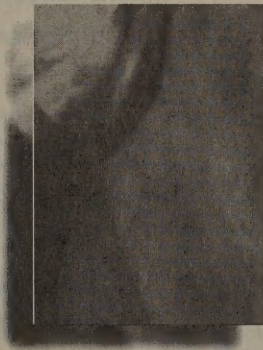
**Photograph by Jerry  
N. Uelsmann, 1969.**

**Uelsmann's compelling  
photomontages have been  
knocking viewers' socks off  
since the early sixties. He  
teaches at the University  
of Florida and is the author  
of three books; the latest  
is *Photo Synthesis* (\$27.95  
postpaid from University  
Press of Florida, 15 NW  
15th Street, Gainesville,  
FL 32611; 904/392-1351  
or 800/226-3822).**



# Commanded By Love

**T**HIS MORNING IT TOOK TEN MINUTES TO GET RIOS' attention and another twenty before he was really listening to me. First he distracted himself with two crows bickering in the cypress trees and then it was the flies that rose with the heat and dust of the day. Mostly I could feel he just wasn't with me. Perhaps he didn't feel my commitment; I was tired from a late night and not fully present when we began. When I finally got irritated, he perked up and we started to get some work done. It's been a week since we opened this new conversation and I feel we're just now beginning to listen to each other.



*Words can change you: real magic. This essay, about the dialogue of power and love, changed the way I feel about the world. The less I say about "Commanded By Love," the sooner you can read it and be changed by it.*

*Richard Strozzi Heckler has a Ph.D. in psychology and a fourth-degree black belt in aikido. He is the author of *The Anatomy of Change* (WER #63:10), *Aikido and the New Warrior* (WER #76:60), and *In Search of the Warrior Spirit* (p. 8 of this issue). A cofounder of the Lomi School, he lives and works in Petaluma, CA. —HLR*

BY RICHARD STROZZI HECKLER



Rios is a young, green quarterhorse who is saddlebroke but has never been formally schooled. In the human world of sports he would be a pulling guard in football: he's muscular, quick, aggressive

in turning a corner, and belligerent when he feels he's being forced or manipulated. He's not a mean or tricky horse, a juvenile delinquent maybe, but in fact he's patient in ways that allow my year-

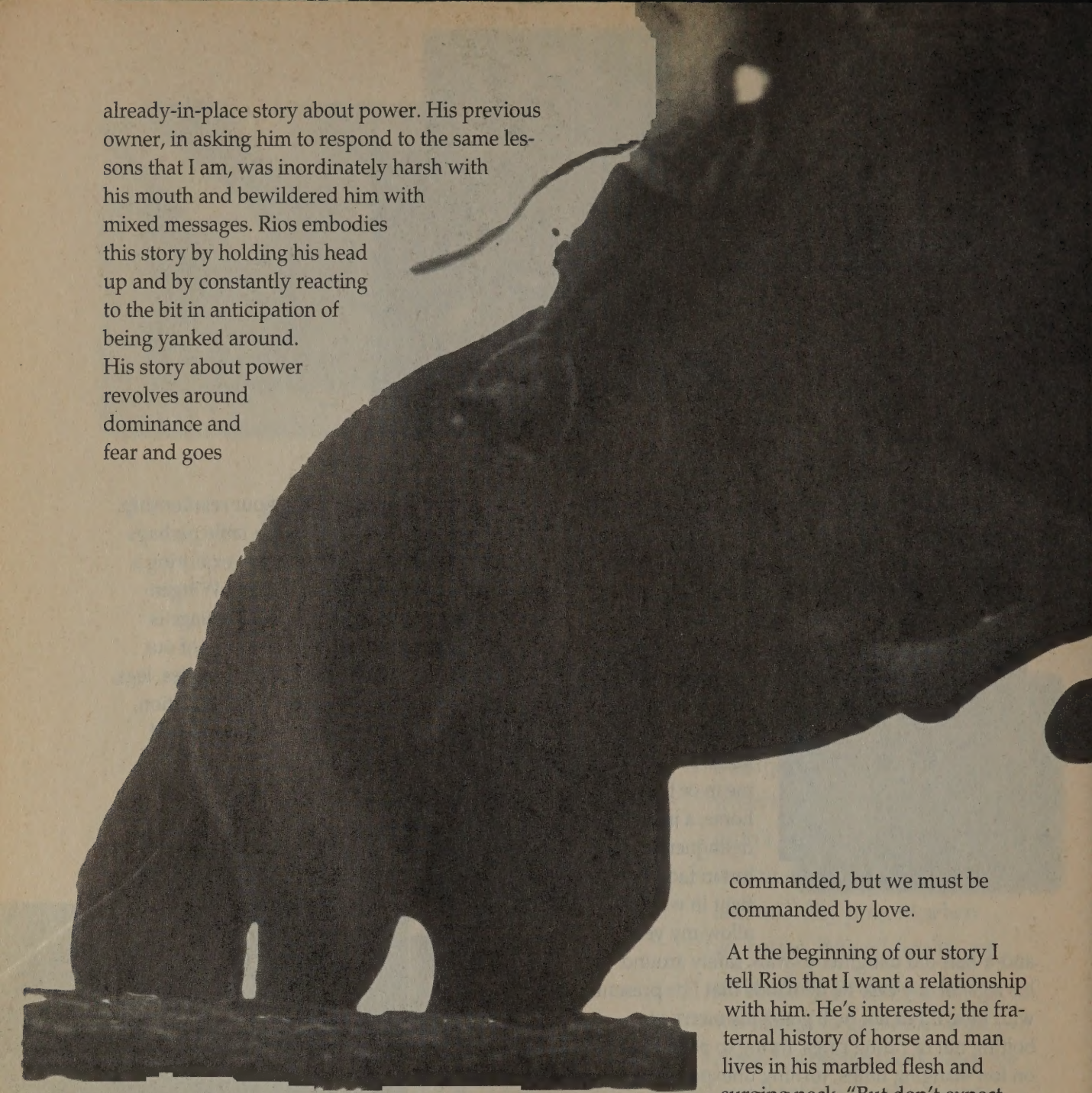
and-a-half-old daughter to walk safely around his legs. In any case he demands that I be present with him; if I'm not he'll go on his merry way — bolting out of riding rings, trying to peel me off on low-hanging limbs, turning unexpectedly in the opposite direction. In short, he's capable of anything.

In this stage of his training I'm asking Rios to bring his head down. When a horse brings his head to a vertical line he is more able to organize around his center of gravity; this increases his potential for moving in a balanced, effortless, coherent, and powerful way. A number of techniques and aids are commonly used to affect this behavior (and that's what it is, behavior modification) — side reins, dropped nosebands, bit-tying — but at a deeper level Rios and I are having a

conversation about the nature of our relationship. This conversation tells a story — a fable perhaps — about a horse and a man who are exploring a definition of power. It brings to mind Wittgenstein's observation, "To imagine a language is to imagine a form of life." The grammar of our discourse is conveyed through skin, muscles, legs, mouth, hands, voice; the syntax is the intention, trust, respect, and authenticity communicated between our energy fields.

What makes this conversation particularly challenging with Rios is that he has a different,





already-in-place story about power. His previous owner, in asking him to respond to the same lessons that I am, was inordinately harsh with his mouth and bewildered him with mixed messages. Rios embodies this story by holding his head up and by constantly reacting to the bit in anticipation of being yanked around. His story about power revolves around dominance and fear and goes

commanded, but we must be commanded by love.

At the beginning of our story I tell Rios that I want a relationship with him. He's interested; the fraternal history of horse and man lives in his marbled flesh and surging neck. "But don't expect that your riding tack has any true

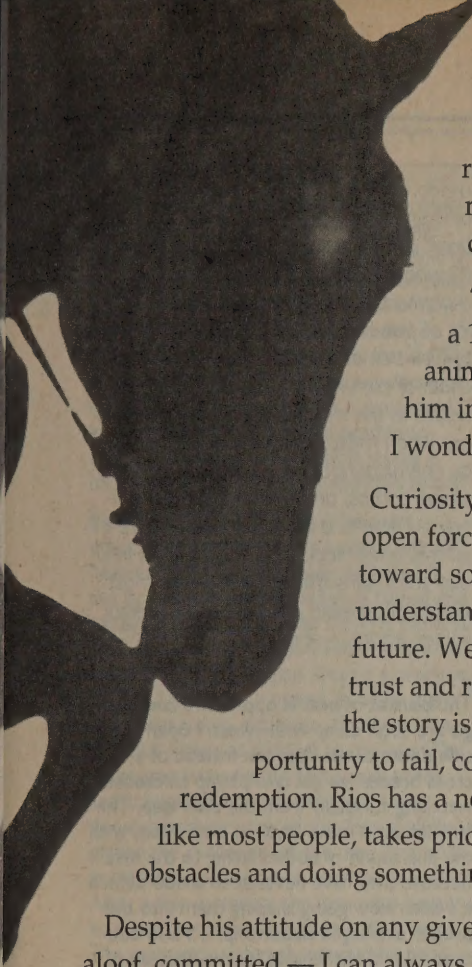
something like this: *The human with his whip, bit, spurs, and calculating mind will dominate me with pain and confusion, so I'll fear him enough to obey his commands.* What happens in this kind of story, as it did with Rios, is that it makes a horse, or a person, neurotic and even psychotic. A crazy horse, like a crazy person, can never really be counted on to listen and respond with an open mind and heart. A story like this also confuses power, which has everything to do with enhancing one's capacity to love and be loved, with coercion. Love cannot be

authority," he adds. "It's only an emblem of power. You must earn the right to ride and command me. To start with, what are your assumptions about horse and rider?" he asks.

"I've never met a horse, nor a human, in which there is no love that longs to emerge."

We proceed, one lesson at a time, always with the same question: Who are you? "How do you respond when I demand something from you?" I ask.





"How do you react when I refuse?" he counters.

"Why would a 1,300-pound animal let me ride him in the first place?" I wonder.

Curiosity is a terrifyingly open force that moves us toward some unknown understanding in the future. We struggle with trust and respect. Here the story is about the opportunity to fail, consequences, and redemption. Rios has a noble heart and, like most people, takes pride in overcoming obstacles and doing something difficult well.

Despite his attitude on any given ride — pissy, aloof, committed — I can always sense the dark pounding blood of his line; an incontestable dignity and robust spirit. If I say I want to ride him, and then act condescendingly — as in, "If I love and coddle you enough maybe you'll do what I ask" — he won't respect me. He'll think that my soul is flabby, that my love has no teeth. "Show me your commitment, show me that you really mean what you say, give me a moral reason to want to do this with you," he asks moment to moment.

"Pay attention to my seat and legs. Quit fussing on the bit and come down here and listen to what I have to say," I demand.

"Are you there?" we constantly whisper back and forth, and the question itself shapes us into the moment, or not.

"You were hurt once," I recognize, "but I want you to trust that it is your radiance that inspires me. There is a great beauty within you that I can help summon."

"How can you know what I want?"

"I don't know," I confess, "but I do know that it is

really me who is being commanded. It is the beauty within you that commands me. We are both, once and at the same time, leader and follower. The beauty in you commands me, my love of your beauty commands you."

Then there are the moments when he brings his head down, collects his power under him, and we become one. There are no more questions, no wondering, only wonder. The roles coalesce into a single mind. "This feeling is power," I say. "This is a powerful feeling," he replies. This power has no ownership, yet we both feel touched by its luminosity and splendor. It is still, yet immensely capable and alive. Then my hat blows off and I momentarily look back. Rios immediately changes gait and direction. "Does he think I have fallen out of love?" I question, "Have I?"

Rios thinks, "He demands so much of me and then leaves. He must love his hat also." Days later, leaving the ring after another session, he suddenly turns and walks over to my hat, fallen much earlier and forgotten. His taking command at that moment is an act of generosity and love.

As our story unfolds, we learn that power is not a thing, or something to be personally accumulated, or having someone obey us, but a capacity to surrender to something greater than either of us. Power is a reservoir of which we can partake, and to which each can lead the other. Psychology can define this power; technique and skill can take us to its threshold; but it is in a set of practices, within a living discipline of spirit and heart, that we come to the realization: it is the surrendering itself that is empowering.

There are two other characters in our story. One is the landscape — the bronze hills, the lacquer-blue sky, dust, the trees faithful in their watching, the inevitable wind. The other is the great arc of time. Our story is not finished. What we learn takes time, and it links the tedious with the dramatic and the mundane with the transcendent. Rios and I, as in human relationships, are empowered only when we are available for it, moment by moment, in our continuing, forever-changing story of who we are together. 🐾

## In Search of the Warrior Spirit

This is a book about whole systems. In aikido, the person who uses martial arts to defend against attack assumes responsibility for the attacker. Attacker and attacked are both part of the same system, and finding the way to reconcile conflict within the system is the larger task looming behind the immediate mission of self-defense.

Normally, I'm skeptical about metaphysical approaches to physical problems such as physical assault. All the talk

about aikido as a "way of reconciling the world" seemed to me too airy for the pragmatics of self-defense — until I spent a few hours a week, for something less than a year, working out in the dojo where Richard Heckler teaches aikido. Watching and feeling what happened to my body and my attention when I tried to whack him over the head was a distinctly corporeal kind of understanding. Above all, I found aikido to be a lesson in attention. It's not about secret pressure points and lightning-fast kicks. It's about being present.

Try telling that to somebody who takes self-defense seriously, and you'll often find yourself in an argument about how this works in the brutally real world. Richard Heckler had a chance to discover the answer to that perennial question for himself when he was invited to teach

aikido to Green Berets. Twenty-five of them. Every day for six months. This book is the chronicle of that experience. It's about peace and war, attention, manhood, America, the human dynamics of power structures, the importance of well-trained human beings in the chain of command, the need for moral values in the military — especially in an era when military thinking is dominated by chemical-nuclear-biological weapons, smart bombs, and other lethal technologies. There is a central place for love in all this, says Heckler, and he says it in a way that gains the respect of the most skeptical possible judges — US Special Forces troops. —HLR

### Power at Play

Ever watch a crowd of kids (or adults) erupt from a gym, gleefully yelling "We won!" when all they did is watch? Why are so many professional athletes black? Why do men get so steamed at the idea of women in sports? Can sports be fun anymore? This book is the first examination of American jock culture that makes sense to me (who is not and never has been a jock). The white, ex-jock author illustrates his main points through interviews with a number of male athletes. His conclusions — positive and negative — seem to ring true. Parents of young kids may find it especially interesting. —J. Baldwin

• With no frontier to conquer, with physical strength becoming less relevant in work, and with urban boys being raised and taught by women, it was feared that males were becoming "soft," that society itself was becoming "feminized." Many men responded to these fears with a defensive insecurity which manifested itself in the creation of new organizations such as the Boy Scouts of America (founded in 1910) as a separate cultural sphere of life where "true manliness" could be instilled in boys by men. The rapid rise and expansion of organized sport during this same era can similarly be interpreted as the creation of a homosocial institution which served to counter men's fears of feminization in the new industrial society.

• Brent F. suggests that as early as junior high school, he was becoming aware that the world of sport was a "structure of failure": "By junior high, I started to realize that I was a good player — maybe even one of the best in my community — but I realized that there were all these people all over the country and how few would get to play sports. By high school, I still dreamed of being a pro — I was a serious athlete, I played hard — but I knew I wasn't heading anywhere. I wasn't going to play pro ball."

These kinds of realizations are, of course, most common among athletes of marginal talent. But one of the striking findings of my research is that lower-class males rarely came to this conclusion early on, while several middle-class males, even some who were excellent athletes, did.

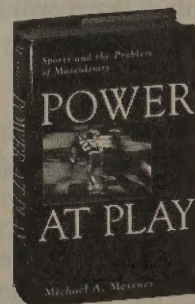
• Athletes' use of performance-enhancing drugs meshes with the contemporary emergence of what Hoberman calls "the technological image of man." Surely, if the body is viewed as a machine whose *raison d'être* is "maximum performance," then the addition of a bit of "high performance fuel" is all to the better. Don Atyeo quotes a professional football player: "If they say, 'It's not whether you win or lose but how you play the game,' then fine, a lot less guys will use drugs. But they've never said that. And as long as winning is the name of the game, you have to take what you can."

• It would be foolhardy to reject sport outright, as some radicals in the past have done. For instance, in the late 1960s and early 1970s, the U.S. counterculture denounced organized competitive sport as inherently destructive. Instead, they encouraged the implementation of "New Games," which emphasized universal participation (in place of a star system), a focus upon enjoyment (instead of upon winning), and spontaneity (instead of rigid rules). Essentially, the counterculture attempted to replace "sport" with "play," and in so doing, threw the baby out with the bath water. Their mistake was to assume that competitive sport is in itself oppressive, instead

• The blanket of heat is oppressive and our gis are soon damp with sweat. I open the side doors of the dojo but instead of a cross breeze we get two plump chickadees watching curiously from the doorstep. The familiar acrid musk smell of men mixes with the dull sound of bodies falling to the mat. Because they have never seen aikido before it's been slow going shaping them into the proper *uke/nage* relationship. It's also educational and challenging for me. Instead of the clear grabs and disciplined strikes that I'm accustomed to from "normal" aikido students, they present an array of combinations that range from hard-charging football tackles to wild beer-hall right hooks.

I walk them along that line between fierceness and harmony. While there's a direct-

of developing a critique of the specific manifestations of sport, as it has been shaped by commercial interests, by racism, and by sexism.



**Power at Play**  
(Sports and the Problem of Masculinity)

Michael A. Messner, 1992; 272 pp.  
ISBN 0-8070-4104-1

**\$15** (\$17.75 postpaid) from Beacon Press,  
25 Beacon Street, Boston, MA 02108;  
617/742-2110

ness in aikido attacks and a follow-through in the throws, there is also an on-going bodily conversation that absolutely requires cooperation. Aikido is a strikingly beautiful art, but to think of it only in terms of flowing and blending would be to slander it. The practice of aikido demands that we live in contradiction and paradox; answers and solutions are guided by what is presented in the moment, not by fixed predispositions. This spontaneity of spirit makes it threatening for institutions and rigid minds.

Even though the moves may be soft at times, they are always done with a whole-heartedness of spirit. Aikido is rooted in the Japanese martial tradition of sword and jujitsu, arts that teach that the first move is a killing move. This lesson was conveyed to me by a teacher in Japan. During a practice session I had been irritated by an insistent and bothersome mosquito. Finally in exasperation I slapped it down to the mat. The instructor immediately came over to me and started shaking his head as if I had done something very wrong. He carefully picked the mosquito off the mat, cupped it in his hand, and began to blow on it gently. After a few moments the mosquito began to quiver and seemingly regained strength. The instructor solemnly opened his hand to show me the mosquito which was now very much alive. I was about to feel guilty for trying to kill this small insect when the instructor brought his hands together in a powerful and commanding crash. He opened his hand a second time to show the dark stain that remained of the mosquito. With a gleam in his eye he said, "Like this, fully!"

This intention towards total commitment, whether it's for creating or destroying, is a major lesson to be learned in aikido. But it's also balanced by a natural flow and order of things which Xenophon, even in the fifth century, commented on: "There is no beauty when something is forced or misunderstood."

Today we're focusing on joint locks and pins. Applied correctly these techniques, taken originally from jujitsu, can easily break a wrist or tear a shoulder from its joint. This is appealing to the men, but in their vigor they forget center and ground. The tendency to lose ourselves in our work, relationship, or desires is a clear metaphor here. The bottom line is that we're only as effective as we are balanced within ourselves. This is a lifelong lesson — it's one that aikido throws in your face every day. If they bunch up in their shoulders, for example, or lean into me while doing one of these techniques, it's easy for me to stop them.

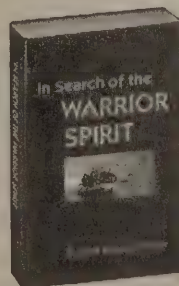
■ The notion that the only alternatives to conflict are fight or flight are imbedded

## Women in Aikido

*You don't have to practice aikido to get a lot out of this book. The principles of aikido can be applied to any domain "where issues of mastery and dominance are at stake." Aikido practice (physical and otherwise) concentrates on developing your "center" — meaning the physical center of gravity in your body, and the habit of being aware of where your center is in a larger sense. Practicing physical patterns in aikido can help regroove emotional patterns in your life.*

*This book articulates the insights, perceptions, and life stories of twelve highly spirited black-belted women who are dedicated to the practice of aikido and its application to all facets of their lives. These women delve into issues of power, sexuality, survival, mothering, livelihood, and artistic expression, and tell us how they use aikido as a creative source to*

in our culture, and our educational institutions have done little to challenge it. Traditional American military policy raises it to the level of a law of nature. The aikidoist, however, trains to respond to aggression by entering into the center of the attack, blending with its energy, and then guiding it into a neutralizing joint lock or throw. If the attacker can be seen as a metaphor for the many attacks of everyday life (conflict with a teammate, disagreeing with a superior officer, running late for an appointment, etc.), it's possible to translate this experience of blending into ordinary activity and interaction.



### In Search of the Warrior Spirit

(Teaching Awareness Disciplines to the Green Berets)

Richard Strozzi Heckler, 1990, 1992; 291 pp. ISBN 1-55643-116-3

**\$12.95** (\$15.45 postpaid) from North Atlantic Books, 2800 Woolsey Street, Berkeley, CA 94705

## Women in Aikido

Andrea Siegel, 1993; 211 pp. ISBN 1-55643-161-9

**\$14.95** (\$17.45 postpaid) from North Atlantic Books, 2800 Woolsey Street, Berkeley, CA 94705



*help them cultivate the art of living.*  
—Ruth Cashman

■ In school, they don't teach you about coordination and integration. They say, "Learn these things, and study these books." I became more stuck in my head. Then, I started doing aikido and it was philosophy in action: nonresistance, how to deal with your feelings, and feel a sense of "lineup" or centeredness in relationship to your body, a situation, and another person. In aikido, for the first time in my life, I got a sense of groundedness. I literally felt the ground under me. I had been floating around, searching for a way to fit in, wherever I could get connected. My attention was up and out all over, looking for somewhere to land. In aikido, I feel my feet on the ground. I put my attention down in my feet, and feel that there is real solid support there. The suggestion, if you have a good teacher, is, "Feel your feet. You are here. There is no place else to go. There is Mother Earth supporting you right in this instant."

■ Aikido is more than just a self-defense. It's much, much deeper. It's a philosophy of life. My whole sense of aikido is like a universal compassion. It's knowing that no matter how bad somebody may appear, there's always some little bit of good in them — something that is salvageable. If I can go out and touch that person in a better light. For me, that's what aikido is. I train on a mat, go to a seminar. I always run into different personalities on the mat. They all have their own little trips they're going through. For me, to be just right there and very empty and just do what I do, and sense what's going on in that end and work with it, that's the art. In that way, it's like water. It's constantly changing. Doing that in my hospital work is the same thing.

# L e g a

*Carrie Lay has a very direct way of looking at people; it can feel disturbing when she focuses on you. When I first read "Legacy," I remembered her unveiled gaze.*

*That direct gaze is part of who she is. "Legacy" is a true story. It is not, however, the end of Carrie's story. To find out what is happening today, with a new generation and in a very different context, see "Birth-right" (p. 18).*

*Carrie lives with her ex-husband and two children in the San Francisco Bay area. This is her first published work. —HLR*

*My grandmother died between the day I wrote this piece and the day it went to publication. I wrote it because I wanted to make sense of my relationship with her when I knew she was dying. Goodbye, Carrie. —Carrie Lay*

BY CARRIE LAY



CARRIE IS MY GRANDMOTHER'S NAME. It was given me by my mother as a gesture of appeasement for the circumstances of my birth. You see, I was born five months almost to the day after my parents were married. The irony of it is that I actually was born premature — six weeks premature — but I was a normal and healthy baby, despite all that.

I spent years getting birthday cards in June. I remember asking my mother when I was five years old why my great uncle never got my birthday right. She told me he must be forgetful. At five years old, I believed her.

Carrie was my grandmother's name and it's her temperament I have inherited. Oh, not the gregarious part. Not even the beautiful part. I'm certainly not religious like she is and I'm not frigid the way I know she is, either, though I did have my frigid spell in high school for a few years. But that's another story.

No, what I inherited from my grandmother, aside from her name, was her raw intelligence combined with her paralyzing fearfulness. Carrie is deathly afraid of germs. She is deathly afraid of sex. I swear she is also deathly afraid of God, though she calls his name out every other minute, it seems, and sits in silent meditation on his power and glory for hours a day.

My grandmother is afraid of feelings, afraid of love and sorrow and honesty and death. She is especially afraid of death. And so am I.

I was cursed the minute they gave me her name, doomed to carry on her legacy for her. People always tell me, "You're so much like your grandmother, Carrie." Every time I hear that, it makes me cringe. So much like her — the woman who, when I have nightmares, haunts my dreams.

My grandmother was not a very affectionate woman. Oh, she was good with words of praise — telling us, always, how wonder-

ful and beautiful we were. But there was something in her face and voice and the arms that wrapped around me and pulled me into her ample floppy chest that warned me never to believe her, that told me I should keep my distance.

Carrie is a remarkable woman, in her way. She won a citywide beauty contest in New York when she was very young. She started a church, singlehandedly, in the mountains where she lived. She helped make my great-uncle a millionaire twice over. The youngest of ten children in a fatherless immigrant family, she always worked, as did her mother before her. Carrie was the baby of her family and was treated as the family pet, rather than as a person. She slept with her mother, in the same bed, until the night she married my grandfather at age twenty-five.

I remember Carrie's stories. She was always full of stories — mostly stories of God and the sinfulness of my other relations and of the sufferings she had endured at their

C

Y



hands. She told me of her sacrifices as a mother and a wife. She told me stories of infidelity and violence and jealousy and ingratitude — mostly directed against her. Her eyes would mist up and she would beat her chest with her fists and flop her cupped hands under her left breast — the breast which is missing now, because it had cancer in it — and tell me about the heartache she had had in this life and how it was only the love of Our Good Lord that saw her through it all. Then she would look into my brown eyes with her sharp watering grey ones and I would feel pinned, like a bug under a needle. “Don’t you believe?” she’d ask me. “Don’t you trust in Our Dear Lord, Carrie?” she’d say. And I would mutely nod my head and make my face look as soft and understanding as I could and hope that she would stop talking to me soon.

When I was in high school, my mother hallucinated that I was her mother, Carrie. I was the only one in the room with her that day, and we were in the middle of yet another awful fight, and I knew it was happening again. I was, once again, becoming someone else in her eyes. She never gave me a name when she did that, but she didn’t have to. I always knew the name she thought was “Carrie.”

This time — this time was different from the others. This time, I knew she wasn’t just walking on the edge. She’d slipped right over it.

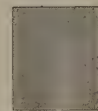
I saw her sitting on the floor with me. Her face was shriveled and wet with her tears. Her whole body was shaking. Her eyes looked glazed and narrow, like my grandmother’s, only so much sadder. I saw those tears in her eyes, my mother’s eyes,

and behind those tears —nothing. She wasn’t there in the room with me. And when she spoke, it wasn’t her voice speaking, but a child’s voice, so very like my mother’s. The voice behind the face was telling me, “You don’t love me! You *never* loved me.” And, despite the fact that she had, only moments before, been telling me how “sick” I was and how cruel I was and how much my life had ruined hers, I put my arms around her shuddering shoulders and crooned to her, “I love you, Mama. You know I’ve always loved you.”

My mother flinched in my arms. She cowered before me and spit. Her hands pushed me away from her and the blankness in her eyes changed to wild hate. I saw her focus on my face, and I knew it wasn’t me she was seeing. It was that other Carrie, my grandmother. “Get away from me. Don’t you touch me,” she said. “You make me sick,” she said. “You make me want to vomit.”

My father came home to find my mother in tears. She didn’t say anything to him, just took the car keys and left. She drove around for many hours. I don’t know where she went. But, later that night, after the lights were all out and everyone else was in bed, I heard my mother’s car pull into our driveway. Through my bedroom window I saw the headlights go out and heard her car door slam. Her high-heeled shoes made a clicking noise on the sidewalk as she walked back to our house. I turned my face against the wall and pulled my blankets up around my shoulders and tried to make my body very relaxed and still. When my mother stopped by my door, I forced my breathing to be regular and deep. When she knocked on it, I didn’t answer.

**There was something in her face and voice and the arms that wrapped around me and pulled me into her ample floppy chest that warned me never to believe her, that told me I should keep my distance.**



I heard her voice — my mother's voice, this time, and not the voice of a child. She was crying. I could hear her sniffing back her tears. "Carrie, honey," she said. I didn't answer. "Sweetheart?" I opened my eyes to slits in the dimness of my room, but I didn't change my breathing and I didn't move. "Carrie, are you awake, honey?" I could hear her clothes rustle as she moved over to my bed. I closed my eyelids just the right amount — not too tightly, so she could tell I was forcing it, but not too softly, so the light would glint off my eyes. My bed sagged under her weight as she sat down on the edge of it and curled her body over mine. I remember her stroking my back, very gently, through the blankets. I stirred just a little and made a sleepy groan. Then I settled back in again. My lips were dry, but she couldn't see that. I felt her body shaking again and heard her sniffles as she whispered, "Carrie. I'm so sorry, Carrie. I'm so sorry." After a few minutes of this, she got up off my bed and moved slowly toward the door. I could hear her open it and close it, very quietly. For a long while after, I lay there, afraid to move.

My mother told me often, after that, that she loved me. It took me ten years to be able to tell her that I love her back. Even now, I get a sick feeling in my stomach when I say it.

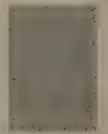
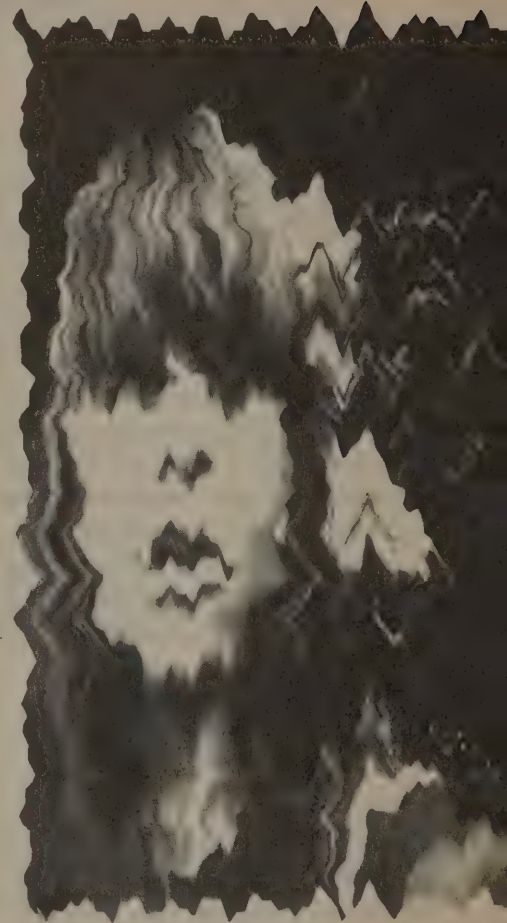
My grandmother always told me that she loved me. She never said a hostile word to me. She never even raised her voice to me, except when carried away by the drama of the moment. She always wrote me long letters and remembered my birthday every year. She told me I was "special," because I was her first-born grandchild and, especially, because I am her "namesake." But I never wanted to be her favorite. I didn't want to be like her.

When I was twelve years old, my mother lost her temper with me one day. I was in a miserable mood. I'd made the drill team and my mother, not being able to sew, had hired my best friend's mother to sew my uniform for me. When I got it back, the zipper didn't work and the bodice didn't fit and I was full of seventh-grade angst and wishing more than anything in the

world to look pretty in my new outfit. I was trying it on in my room and crying because it just hung on me and I felt so ugly. My mother had her leg in a cast. She'd sprained her ankle in a gopher hole again and the cast was heavy and unwieldy and the itching was driving her crazy. She used to unwind coat hangers and dig around inside her cast with them, tearing her flesh as she did so, just to get at the itch. Her cast had been bothering her badly that day.

I remember my mother's voice as she shrieked at me, "That does it!" I heard her bare foot thump on the wooden floor and her cast smack against the floorboards as she came down the hall toward me. Her face as she entered my room was my mother's face, contorted, red and twisted, her eyes bulging out. She backhanded me across my cheek and began pummeling my body with her open hands. I backed away from her and that made her angrier. The hands turned to fists and I crawled, backward, onto my bed and shielded my face and my chest with my arms. I pleaded with her to stop but that only made it worse for me. I wedged my back into the corner of the wall and curled myself up into a ball so she couldn't reach any part of me with her fists. That's when she lost it. She wasn't my mother any more. A shadow passed across her face and I saw her become someone else.

I had a desk in my room and at that desk was a chair and I saw my mother pick up the chair and head toward me. I stared into the face that wasn't my mother's face any more as she shrieked as loudly as I'd ever heard her shriek and lifted the chair, with both arms, high above her head. I looked at this woman who was my mother and inside



**My father told me that it is never all right to beat up your child, but that I was very lucky, because I didn't have to grow up with this all the time the way my mother had. He told me that he would never let her beat me up again. He lied.**

me a cold anger rose. I would not let her break a chair over me. I would not let her break me with that chair. I stared her straight in the face and decided to kick the chair out of her hands if she brought it down on me.

She must have seen the change in my eyes, because she put the chair down and began crying. I crawled off my bed and left her there, looking for all the world like I had just hit her over the head with a piece of furniture. I walked out the door and down the stairs and, as I was going, I heard her calling after me, so very sadly, "Carrie! Carrie!" I did not look back.

I spent the entire day at my friend's house. When my father came to the door three times, looking for me, they told him I was not there. By the time the sun was setting, my friend's family was getting a little uncomfortable with having me around. They said I could spend the night, if I wished. But my father knocked on the door again. This time, I was afraid. I was afraid of what he would do to me if I didn't come out. I was afraid I would get it

worse when I did finally go home, which I knew I would have to do. I had nowhere else to go.

My father drove me around, through various parts of the city. I didn't tell him much. Mostly, he talked to me. He told me about my grandmother and my mother — how my mother was beaten up a lot as a kid. How he never forgave my grandmother for doing that to my Mom. How my mother wasn't quite normal because of this, but we couldn't blame her for it. How my grandmother was a very sick woman who'd hurt my mother very much and how we had to make allowances for that. My father told me that it is never all right to beat up your child, but that I was very lucky, because I didn't have to grow up with this all the

time the way my mother had. He told me that he would never let her beat me up again. He lied.

I developed a strategy for stopping my mother from hitting me when I was in high school. Since it was clearly accepted by everyone in our family that beating me up was wrong, I had some leverage. My mother would lose control and strike out at me with her fists, usually with tears in her eyes, and I would hold onto her arms and stop her from hitting me. I was almost as strong as she was and I had Right on my side, so she would stop swinging and start sobbing instead. I would gaze into her face, with my soft understanding look, the one I used on my grandmother, and tell my mother, "You know I don't deserve this," and her eyes would meet mine and shine with their guilt and she would stop struggling against me.

I knew my grandmother, Carrie, used to be a violent woman, though she was never violent around me. I remember talking to my mother on my wedding night and asking her about her wedding night. Like my mother before me, I was pregnant when I got married. So, we had something in common to talk about. I remember sitting on the bed with my mother. I was in a white-and-gold Chinese wedding gown. She was wearing a turquoise dress. My mother told me that her wedding night was the last time her mother hit her. She was 3<sup>1</sup>/<sub>2</sub> months pregnant and my grandmother, Carrie, punched her in the stomach repeatedly. "Didn't you try and stop her?" I asked my mother. She just looked at me with tears in her eyes and shook her head. "I tried," she said. "I didn't want her to hurt my baby." I saw her flutter her arms and I realized that she was used to enduring things. So, you see, my life did not come easily.

I have a little daughter. When it came time to name her, I thought about it very carefully. The name I chose was Ariel — "Lioness of God" — a strong name and a courageous one. I don't believe in God, but I do believe in courage and strength. I hope her legacy serves her well. 🐾

## The Way We Never Were

If your family is weird, don't worry about it. You're as American as apple pie. People seem to have a wide spectrum of experiences with their real, flesh-and-blood families. Real families these days, more often than not, are broken, blended, toxic, dysfunctional, nontraditional. But nobody disagrees about what the ideal American family looks and talks like. The ideal American family is *Ward and June* and *Wally and the Beav*. The *Cleavers*. The American family invoked so piously at political conventions and in newspaper editorials was the invention of scriptwriters in the 1950s.

Stephanie Coontz is a historian of the family who shows us in *The Way We Never Were* what very few non-historians have known — that ideal American families have always been fictions concocted as fronts for political agendas. Wives have been laborers and chattel, children have been set to work in mines before dawn, alcohol and substance abuse has always been rife, and all the present-day horror over physical and sexual abuse of children was hardly the norm for most of our history. The fiction of the well-scrubbed, cheerful nuclear family is an old underground theme of our history; television came along and amplified that deeper myth through the template of the politically desirable zeitgeist of the 1950s and imprinted the *Cleavers* in everyone's minds through decades of reruns.

"Fiction" is a polite word for "lie," when the reality it depicts is cruelly different from that which is portrayed. Coontz systematically counters familiar myths about families by revealing grim statistics and horrifying descriptions of family life over the past two centuries that contradict the public images of the family promulgated by the mass media of the times. This is not an objective history. The historian in this case is unabashedly left-wing. Although the use of the image of the traditional family as a political weapon has been a tactic of the political right, Coontz herself takes a stance that family problems are not the cause but the result of inequities in the society as a whole. By taking a stance, the author paints her own anti-myth of the family. Perhaps humans are hardwired to invent myths about what families ought to be like. —HLR

- Visions of past family life exert a powerful emotional pull on most Americans, and

with good reason, given the fragility of many modern commitments. The problem is not only that these visions bear a suspicious resemblance to reruns of old television series, but also that the scripts of different shows have been mixed up: June Cleaver suddenly has a Grandpa Walton dispensing advice in her kitchen; Donna Stone, vacuuming the living room in her inevitable pearls and high heels, is no longer married to a busy modern pediatrician but to a small-town sheriff who, like Andy Taylor of "The Andy Griffith Show," solves community problems through informal, old-fashioned common sense.

Like most visions of a "golden age," the "traditional family" my students describe evaporates on closer examination. It is an ahistorical amalgam of structures, values, and behaviors that never coexisted in the same time and place. The notion that traditional families fostered intense intimacy between husbands and wives while creating mothers who were totally available to their children, for example, is an idea that combines some characteristics of the white, middle-class family in the mid-nineteenth

century and some of a rival family ideal first articulated in the 1920s. The first family revolved emotionally around the mother-child axis, leaving the husband-wife relationship stilted and formal. The second focused on an eroticized couple relationship, demanding that mothers curb emotional "overinvestment" in their children. The hybrid idea that a woman can be fully absorbed with her youngsters while simultaneously maintaining passionate sexual excitement with her husband was a 1950s invention that drove thousands of women to therapists, tranquilizers, or alcohol when they actually tried to live up to it.

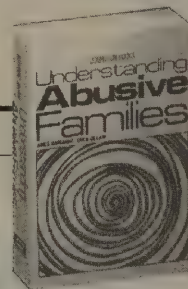
- Despite humane intentions, an overemphasis on personal responsibility for strengthening family values encourages a way of thinking that leads to moralizing rather than mobilizing for concrete reforms. While values are important to Americans, most do not support the sort of scapegoating that occurs when all family problems are blamed

## Understanding Abusive Families

"Child abuse" doesn't have to be sexual, or dramatic. It can begin with being prevented from fully bonding with your infant at the hospital, or from finding yourself at odds with your adolescent, or from the social autonomy/isolation so valued in America: even from the fundamental assumption of children as property. Abusive family patterns aren't just "out there" with "bad" people totally unlike ourselves.

*Understanding Abusive Families* is neither trendy nor clinical. The ecology of American family life is probed; negative situations are seen to arise in natural consequence; solutions developed are also complex and ecological. Social agencies' pooled efforts; common acceptance of children's rights; and grassroots volunteerism, if marketed well, could remedy more than governmental crisis intervention and bureaucratic segmentation. Anybody, anywhere, can start the ball rolling. But the main point here is the recognition that "helping people" by pushing them to become independent, rather than interdependent, may be the great American mistake. Going it alone doesn't take us very far. —R. Leveque

- One reason our nation's social-service system fails to meet the needs of mistreated youth is because of the way it developed, a



### Understanding Abusive Families

James Garbarino and Gwen Gilliam. Free Press, 1984; 288 pp. ISBN 0-669-19782-9

**\$18.95** postpaid from Macmillan Publishing Company, 100 Front Street, Riverside, NJ 08075; 800/257-5755

little at a time, along a rehabilitative medical model. Each agency was established in response to a specific problem and was organized around meeting a specific need. As a result, our system is based on categorical programs that deal exclusively with alcohol or drug abuse, or that only aid in family planning, vocational guidance programs, and so on. Professionals within the system need to be able to label the problem before they can assign the person to services and services to the person. Although they may want to help the whole person, individual helpers in these agencies must swim against a strong bureaucratic tide.

This segmented structure causes many abused adolescents to plug into the system through their own deviant behavior, be it drug dependency, truancy, or running away. Caseworkers know that most of the problems that a given family may present to a variety of different agencies often stem from the same source of dysfunction.



on "bad values." Most of us are painfully aware that there is no clear way of separating "family values" from "the system." Our values may make a difference in the way we respond to the challenges posed by economic and political institutions, but those institutions also reinforce certain values and extinguish others. The problem is not to berate people for abandoning past family values, nor to exhort them to adopt better values in the future — the problem is to build the institutions and social support networks that allow people to act on their best values rather than on their worst ones. We need to get past abstract nostalgia for traditional family values and develop a clearer sense of how past families actually worked and what the different consequences of various family behaviors and values have been. Good history and responsible social policy should help people incorporate the full complexity and the tradeoffs of family change into their analyses and thus into action. Mythmaking does not accomplish this end.

■ If it is hard to find a satisfactory model of the traditional family, it is also hard to make global judgments about how families have changed and whether they are getting better or worse. Some generalizations about the past are pure myth. Whatever the merit of recurring complaints about the "rootlessness" of modern life, for instance, families are *not* more mobile and transient than they used to be. In most nineteenth-century cities, both large and small, more than 50 percent — and often up to 75 percent — of the residents in any given year were no longer there ten years later. People born in the twentieth century are much more likely to live near their birthplace than were people born in the nineteenth century.

■ The values of 1950s families also were new. The emphasis on producing a whole world of satisfaction, amusement, and inventiveness within the nuclear family had no precedents. Historian Elaine Tyler May comments: "The legendary family of the 1950s . . . was not, as common wisdom tells us, the last gasp of 'traditional' family life with deep roots in the past. Rather, it was the first wholehearted effort to create a home that would fulfill virtually all its members' personal needs through an energized and expressive personal life."

■ At first glance, it may seem depressing to think of our current family problems as part of a much larger socioeconomic crisis. But surely it is even more depressing to think that the problem is caused by people's rotten values or irredeemable selfishness. That kind of analysis leads people to give up in despair. When I go out to lecture

## Writing Yourself Home

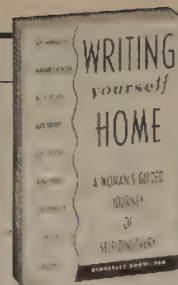
*When I first started to write a journal I was surprised to discover that I didn't have to know consciously what I wanted to say beforehand — if I just started somewhere that had some energy it would lead me to the things I wanted to say and into the territory I wanted to explore. This surrender to the process is scary and exhilarating, and is precisely why writing can work so well as therapy, as a way to get to know oneself.*

*Kimberley Snow's book is aimed at women who want to use journal-writing as a tool for personal growth, and also at women who want to enhance their writing skills. Snow uses excerpts from writings by women writers as stimulus and then gives suggestions of writing topics based on the reading. It's a simple and effective technique. She's picked out some great passages from famous and unknown writers, and she goes straight to the heart — suggesting that we write about our first periods, about penises, ending relationships, aging, peace, what we are afraid of, and a host of other topics. —Lara Owen*

■ In the middle of the night silence wakes me, the rain has stopped. Blank dark, I can see nothing, I try to move my hands but I can't. The fear arrives like waves, like footfalls, it has no center; it encloses me like armor, it's my skin that is afraid, rigid. They want

on family history, I sometimes feel that half the people I talk to are torturing themselves trying to figure out what they did wrong in their families and the other half are torturing themselves trying to figure out what their parents did wrong. Seeing our family pains as part of a larger social predicament means that we can let ourselves — or our parents — off the hook. Maybe our personal difficulties are not *all* our family's fault; maybe our family's difficulties are not *all* our personal fault.

Most people who come to this conclusion do not use it as an excuse for complacency; instead, they find that it frees valuable time and energy for figuring out what they can actually do to help solve the problem. There are a lot of places to start — in the local schools, in the programs described by Schorr, in the advocacy groups cited in some of my notes. Wherever a person starts, he or she will make a difference in the lives of others. And that person will probably find an unexpected side benefit. For, despite all the difficulty of making generalizations about past families, the historical evidence does suggest that families have been most successful wherever they have



### Writing Yourself Home

Kimberley Snow, 1989, 1992; 187 pp. ISBN 0-943233-32-1

**\$10.95** (\$12.95 postpaid) from Conari Press, 1144 65th Street/Suite B, Emeryville, CA 94608; 800/685-9595

to get in, they want me to open the windows, the door, they can't do it by themselves. I'm the only one, they are depending on me but I don't know any longer who they are; however they come back they won't be the same, they will have changed. I willed it, I called to them, that they should arrive is logical; but logic is a wall, I built it, on the other side is terror.

Above on the roof is the finger-tapping of water dripping from the trees. I hear breathing, withheld, observant, not in the house but all around it.

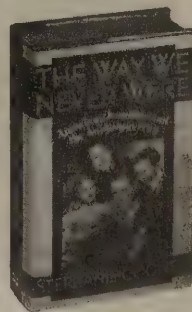
—Margaret Atwood, *Surfacing*

Make a list of things you fear most.

Describe a chronic fear and the effect it has had on your life. Give the fear a name and enter into a dialogue with it.

There is generalized fear in the world. Try to articulate this fear.

built meaningful, solid networks and commitments *beyond* their own boundaries. We may discover that the best thing we will ever do for our own families, however we define them, is to get involved in community or political action to help others.



### The Way We Never Were

(American Families and the Nostalgia Trap) Stephanie Coontz. Basic Books, 1992; 391 pp. ISBN 0-465-00135-1

**\$27** (29.75 postpaid) from HarperCollins Publishers/Direct Mail, P. O. Box 588, Dunmore, PA 18512; 800/331-3761

## Daughters and Mothers

*The Firmans* — mother and daughter are psychotherapists — share their experiences and those of some of the hundreds of women who have attended their workshops. In the process, they illuminate issues behind the symbiotic mother/daughter relationship, with an eye toward healing, acceptance, and growth.

*My mother and I* attended one of the Firmans' workshops a few summers ago. Over a hundred women of all ages, from all over, wrote, fought, and cried their way toward better understanding of the mother-daughter relationship.

Appealing to the wisdom of a true, inner self, the Firmans analyze how (for example) blame and guilt can be limiting emotions for women in the roles of mother and daughter. Although the book doesn't delve too deeply into cultural reasons surrounding the experience of motherhood and what it means to be female, it does offer explanations for understanding how and why mothers and daughters can or cannot communicate; we learn about dependence and independence, and about distinguishing among the "scripts" written for us by our families and society. A "workbook" section at the end of each chapter offers a constructive, interactive way for the reader to explore her own experiences.

Unromantic and realistic in its expectations, *Daughters and Mothers* concludes with notions of acceptance and healing, even if it means severing the ties of an unhealthy relationship. —Donna Aitoro

### ■ The Script

We do make the story our own at a certain time, and that time is earlier than we might think. It is not at the age of emancipation that we take over the authorship of our own stories. It is a recognized fact that children, often under the age of twelve, set the course for their entire lives by decisions that they make at that early age. If we are a part of mother's story in infancy, our life dependent on hers, our happiness revolving around her, by the time we are two we do create our own impact on the story. Even with rigidly controlling parents, a child's responses, interpretations, and decisions about her situation indicate her authorship of her own story, at least in part.

Ideally, a child's uniqueness will shine through always, but she will not be forced to decide prematurely about anything ultimate. This is often not the case, however. For many of us, before we know how to write a single word we have begun to create a script for ourselves based on the in-

formation that we are receiving from our world. Decisions that we make as children become the basis for a script that will define our lives in deeply rooted and limiting ways. As we grow, we decide what we have to do to get our needs and wants met, and how we'll get along with the people around us. We learn what pleases and how to get what we want by pleasing, or how to pretend that we don't want anything and thus win approval. We listen carefully to the messages we are being given. From all this information, we make enormous decisions early in life. Those decisions fit the experiences we were having at one, two, five, or six, but the decisions — made by young children — are sadly lacking in objectivity, perspective, and adult thinking skills. They are made out of a view of the world colored completely by our littleness and by how we are being conditioned. Mother's

## Good Behavior

This compendium of humane and practical solutions to children's problems will provide solid support to any parent. The authors' emphasis is on the straightforward and the possible. Problems discussed range from those most familiar to most parents (tantrums, nightmares, nose-picking) to the less common and more complicated (bullying, fear of riding in cars, Attention Deficit Disorder). In each case, readers will find a clear, succinct problem definition and an uncomplicated and effective practice that will generally yield positive results.

A wealth of developmental information will enable parents to judge the appropriateness of a child's behavior and to judge when professional help is warranted. In the main, however, the book is designed to be a comprehensive do-it-yourself guide to the years from birth through twelve. How can a book that observes, "Whining is guaranteed to force a parent to look deep inside for will power and patience" not be a good friend? —Nancy Pietrafesa

### ● Banging.

Little children love to make noise, and they bang objects for the sheer enjoyment of it. That's fine, but often it becomes very hard on a parent's nerves. In this case, you must be preventive as well as inventive.

• Provide the objects. Give him toys designed to be banged upon, such as drums and workbenches. Provide him with a wooden spoon and an old pot or a rubber hammer and a tray. Rubber or plastic objects are the easiest on your ears and nerves. Make it clear what he may bang

presence infuses all of our experience and thus her hand is clearly seen in most decisions that we make at this young age.

## Daughters and Mothers

Julie Firman and Dorothy Firman, 1989; 234 pp. ISBN 0-8264-0492-8

**\$11.95** (\$14.45 postpaid) from Crossroad Publishing Co. c/o Publisher Resources, 1224 Heil Quaker Boulevard, La Vergne, TN 37086-7001; 800/937-5557



## Good Behavior

Stephen W. Garber, Marianne Daniels Garber and Robyn Freedman Spizman. St. Martin's Press, 1987; 565 pp. ISBN 0-312-92134-9

**\$5.95** (\$8.95 postpaid) from Publishers Book & Audio, P. O. Box 070059, Staten Island, NY 10307; 800/288-2131

on — "Bobby, it's fine to bang your drum, but you may not bang on the table with your spoon."

- Set circumstances. Make sure the child knows when he may and may not bang. Banging may be fine at home, but not in restaurants or at Grandpa's house. Some parents give their babies pots and pans to bang on while they prepare dinner. That way, everybody is happy and busy in the kitchen.
- Provide consequences. If the banging is too much for you and you want him to stop, time-out the banging object by taking it away for a certain amount of time.

### ■ Reward Honest Behavior.

It is equally or more important to reinforce honesty consistently as it is to make restitution for lack of it. Praise the child for walking past the candy counter without reaching for anything; give support to the youngster who finds and returns lost items to other people. Point out items in the newspaper or stories on television that illustrate honesty. If a child has previously taken money or other items from family members, don't hide your money or other tempting things. Behave normally, and as he shows his new trustworthiness, praise his honesty lavishly.

## At Your SERVAS Abroad

BY ARTHUR P. GLICKMAN

If you're sincerely interested in meeting local people as you travel the world, or if you'd like to host foreign visitors, an international organization exists that facilitates short stays in people's homes in over ninety countries.

Called Servas, its primary goal is to promote world peace by bringing people of diverse cultures, races and backgrounds together in homes throughout the world. A visitor typically stays for two days, although one may be invited to stay longer.

While the rules vary from country to country, in the US one can join Servas (Esperanto for "we serve") in order to stay in other people's homes without being required to host visitors. The annual member-

ship fee for travelers is \$55, with a refundable deposit of \$25 for lists of hosts; there is no fee for children under eighteen traveling with a parent. Servas requests that hosts contribute \$25 per year.

While there is no charge for lodging, the organization is interested in travelers looking for more than just a free place to stay. (Travelers should not depend on having continuous access to hosts.) What is important, says Servas's Jinny V. Batterson, is that the visits become meaningful through involvement in the household. Servas strives to foster "understanding between people . . . through the person-to-person sharing of ideas, questions, interests and concerns."

Membership requires an interview and references. While travelers are interviewed and approved throughout the year, host registration generally occurs in the fall. The United States Servas Committee, Inc., approves about 2,000 travelers and a similar number of hosts annually.

Servas was founded in Denmark in 1948 by an American conscientious objector and a group of his friends, to enable young people to "learn the ways of peace." Servas is affiliated with the United Nations as a non-governmental organization.

*The US Servas Committee has offices at 11 John Street, Suite 407, New York, NY 10038; 212/267-0252.*

## The Whole World Language Catalog

It's a truism of language study that the best way to learn a new language is to read, write, listen and speak in that language — not drills and practice on artificial topics, but the ordinary language as it's actually written and spoken.

Unfortunately, while many sources of learning materials are available to the student of languages, most available audio material is limited to stock vocabulary drills and standard language courses. For the student who wants to hear the language as it is really used, there is little to be found.

Or was. The Whole World Language Catalog has the usual assortment of repeat-after-me tapes, but it also offers Alexander Solzhenitzin reading *One Day in the Life of Ivan Denisovich* in Russian, a selection of foreign films on videotape, the Psalms in Portuguese, the board game "Monopoly" in Dutch, Erika Hoffer lecturing on psychology in German, and much more.

Furthermore, this catalog covers an unusually broad range of languages. In addition to the usual Indo-European suspects (German, Russian, and the Romance languages) and the popular Asian languages, it contains material for the student of Scots and Irish Gaelic, Lithuanian, Turkish, Amharic, Urdu, Ta-

galog, Navaho, Haitian Creole, and 58 other tongues. Full courses (with tapes and textbooks) are available for most of these. The catalog also has a selection of courses for the student of English as a second language.

Students who have already gone beyond the beginners' drills will find this catalog a godsend, but it's also useful to students at any level in learning a feel for the usage and rhythms of the language as it's spoken. —Jeanne DeVoto

### The Whole World Language Catalog

Free from Audio-Forum, 96 Broad Street, Guilford, CT 06437; 800/243-1234

### The International Scene Do's and Taboos

Written by cross-cultural guru Roger Axtell, these handy books are useful whether you are planning a trip or simply want to be "in the know."

**The Do's and Taboos of International Trade.** A primer on hundreds of ways to make or break deals when trading around the world. 320-p. paperback, \$14.95. Order #B4941X.

**Gestures: The Do's and Taboos of Body Language around the World.** A guide from head to toe of gestures from greetings to insults. 240-p. paperback, \$11.95. Order #B36725.

### Basic Medical Navajo

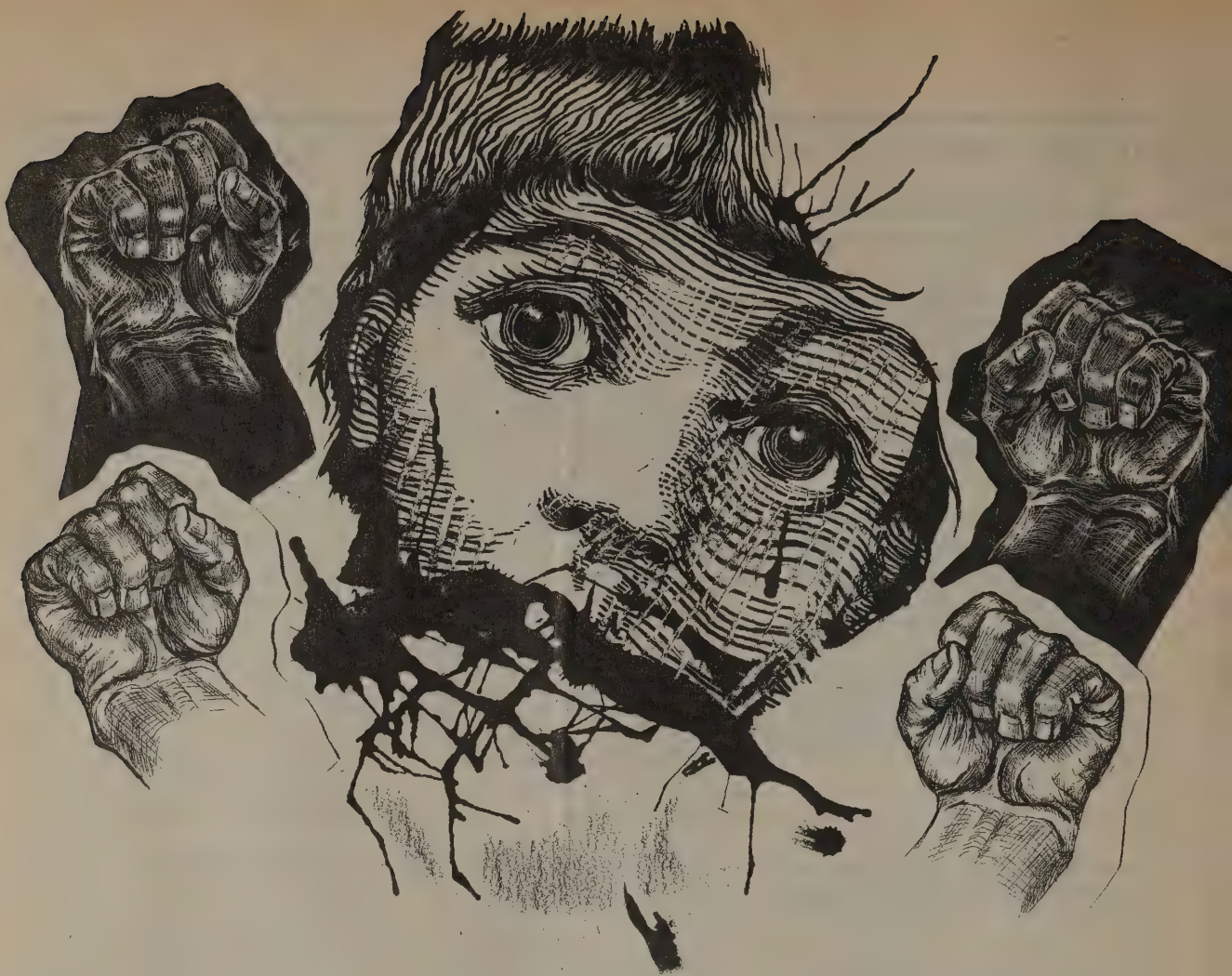
This is an elementary course for physicians and nurses who treat Navajo speakers. Each section consists of dialogs, vocabulary, questions and instructions, grammatical explanations and notes. Topics range from childhood ailments to psychiatric problems. 1 cassette (1 hr.) and 141-p. text, \$39. Order #AFNV40.

### StoryBridges to French for Children

Using the art of storytelling, this charming bilingual program is as entertaining as it is instructive. Young children become participants as they join the storyteller's young helpers, Sadie and Sydney, in repeating the French words and phrases spoken in the context of familiar stories such as *Little Red Riding Hood*. This program is a fun and easy way to start young learners speaking French. 3 cassettes (53 min.), \$19.95. Order #SFR125.

### Survival English for Spanish Speakers

This program was produced by the Center for Applied Linguistics to introduce basic English vocabulary necessary for day-to-day life in the United States. The English phrases in the book are grouped by subject for easy reference, and cover a wide range of situations. For the most part the phrases are presented in the form of short two-line dialogs. 4 cassettes and book, \$49.50. Order #AFE555. Book only, \$9. Order #AFE562.



# Birthright

BY CARRIE LAY

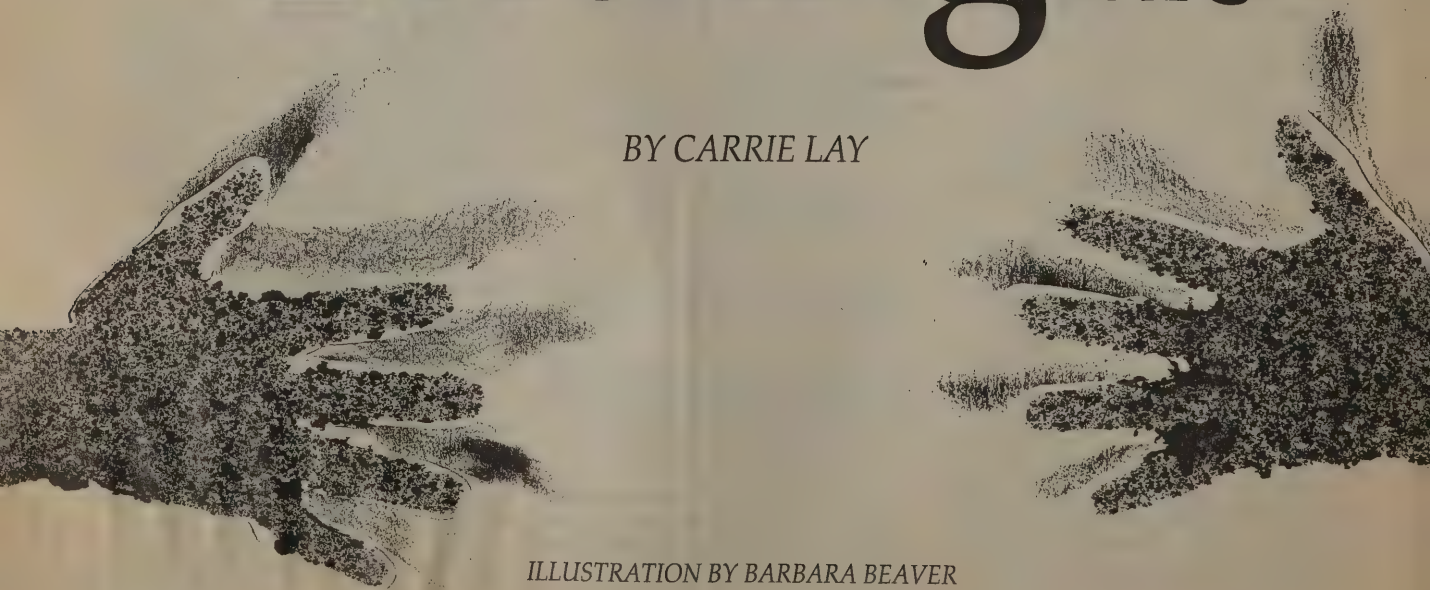
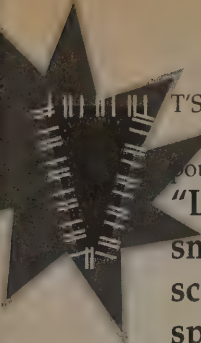


ILLUSTRATION BY BARBARA BEAVER



IT'S FOUR O'CLOCK on a Tuesday afternoon and Ariel and I are locked in my room. David is pounding on my door with his fists and screaming, "Let me out! It's scary in here! The smoke alarm might go off and make a scary loud noise and anyway there are spiders in here and they might bite me!

Let me out!"

**Poundpoundpound.** I hear David ripping the poster I've taped to the outside of my door. This is the second one in as many months. I didn't expect it to last long.

**Poundpoundpound. "Let me out!"**

he screams. His voice is hoarse and I can hear his breath rasping in his throat between sentences.

David is locked in the time-out hall again. Time-out hall is a last-ditch measure. We usually try reasoning with David first. If that doesn't work, we put him in his chair. All too often, David won't stay. So, he goes in the hall until he's quiet for five minutes. He knows what's expected of him. We always explain, as we lock the six doors that lead onto it and remove all the toys and potential weapons, "When you're quiet for five minutes, David, then you can come out. Mommy's going to set the timer."

**Poundpoundpound.**

"That's no fair! My sister attacked me. She lied to me. I only hurt her because she made me angry, that's why!"

David's sister, Ariel, is four years old. David is eight.

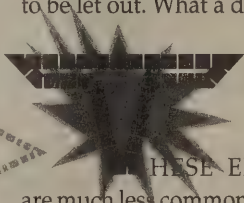
Ariel is sticking her fingers under the bedroom door, shoving pencils and bits of paper to her brother. "Here, David." She feels sorry for him. He grabs her fingers from under the door and begins twisting them. Ariel begins to cry.

"Ariel, come away from there. You know he'll only hurt you when he's angry." Ariel isn't listening to me.

She's rubbing her eyes with her free hand and saying, "Ouch, David. You hurt me! Why did you hurt me, David?" David responds by punching her fingers, which are still shoved under the door. I decide it's time for me to act.

I step over to the door and extricate Ariel's fingers. I pull her well away from her brother and turn her to face me. David is shrieking in anger behind her. I ignore him. "Ariel," I say, "You know David's going to hurt you when he's angry. Stay away from him until he's calm." She struggles away from me, "I don't want to."

Great. I stand Ariel in a corner away from the door. Now they're both crying and demanding to be let out. What a day.



*The night I first read "Legacy" (p. 10), I knew I wanted to publish it. I also knew something that the reader didn't know—that there is another generation in Carrie's lineage, and that Carrie's relationship with her children is distinctly different from her grandmother's and mother's relationships with her. I asked Carrie to write about life with her son, David. The next day, she had a draft ready. Like "Legacy," "Birthright" is about a painful experience. Like "Legacy," it makes powerful reading. Seeing clearly, communicating directly, and remaining patient against tough odds seem to be Carrie's coping tools. So is her ability to write about her life. We look forward to future contributions. —HLR*

THESE EPISODES are much less common than they used to be. A year and a half ago, David was having a tantrum, destroying property, or acting aggressively toward someone a couple of times an hour. We kept track of this behavior for several weeks when Jackie, our behaviorist, first started coming to our house.

Just two years ago Ned and I were seriously considering institutionalizing David. He tried to kill his sister several times. He once tried to stab me in the neck with a pencil. He spent three months kicking and punching my chest where I had just had surgery. He broke every ornament and decoration in our house that he could reach; he peeled the paint off the walls. He also managed to destroy both

**For the first four years of David's life, I could not brush his differences aside. When David's behavior was unusual or strange, everyone else was quite willing to see me as the reason for it. In this culture, mothers are presumed to be the cause of most of their kids' problems, especially when the children are little.**

our stereo speakers, which we still haven't been able to replace.

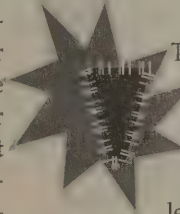
David has autism. Technically, he has a very high-functioning form of autism called Asperger's Syndrome. Asperger's Syndrome kids are of normal or near-normal intelligence. Their language and socialization skills are impaired, as well as their fine motor coordination. This impairment is not always noticeable to the casual observer. Folks often consider David "eccentric" or "odd," without putting the autism label on him.

It took us four years to discover David's autism. This is actually pretty early to diagnose an Asperger's kid. Asperger's Syndrome children often slip through the cracks until grade school or even later.

David was one of those kids whose symptoms slipped in and out of the criteria for classic autism, depending upon whether he was having a bad day or had just experienced a developmental leap. It took us a year and seven different groups of specialists to finally arrive at a diagnosis for our son. David was diagnosed with: autism or ADD; autism; PDD, atypical (Asperger's Syndrome); overanxious disorder; obsessive-compulsive disorder; PDD, not otherwise specified (Asperger's Syndrome); Asperger's Syndrome; autism. Finally, the PDD people agreed with the Asperger's Syndrome people, who agreed, eventually, with the autism people.

It was an exhausting process, but nec-

essary to get services for him. It also gave me a sense of control to be able to know exactly what was wrong with him and where it came from. For the longest time, I'd blamed myself.



#### IT'S MIDNIGHT NOW.

Our little crisis earlier in the day resolved itself after David realized I wasn't going to let him out of the hall until he gained some self-control. I managed to distract Ariel from her brother with a pair of blunt-edged scissors and several pieces of my good typing paper. Ariel and I were in my room because I wanted to log into the WELL to distract myself from David's screaming. My Mac Plus and modem are in my room. Unfortunately, the time-out hall is between my bedroom and the rest of the house, so I had to bring Ariel in with me.

At night, the house becomes very quiet. I look in on the children. Ariel fell asleep hours ago. David is reading quietly in his bed. We put the kids to bed at 9:30 every night. Ariel usually falls asleep right away. It is common for David to be up for several more hours. But at least he stays in his bed now, after we put him there. He has a couple of lights attached to the headboard of his water bed. David is particularly fond of lights. For some reason he prefers fluorescents, which I hate. David earned his fluorescent headboard light by avoiding hall time-out\* for a whole week. He re-

sponds well to rewards. This makes life easier for all of us.

A year ago last Christmas, David and I went to the hardware store to make his biggest purchase ever. He'd been saving his weekly allowance for months; I had told him when he'd saved enough to pay for half of the fluorescent lantern he was infatuated with, I'd front the money for the other half. We walked into the store together and David knew just what aisle his lantern was in. It required two \$12 batteries, a contingency I hadn't planned on. We could only afford to buy one. The store manager snuck us a free battery as we were leaving. He didn't say a word, just put his finger to his lips and smiled. He recognized David. My son often goes to this particular store with his Dad.

David has always been obsessed with lights. One of the few things that could calm him as a baby was watching the lights flick off and on. When he got a little older, he would point to the light switch and say, "Light! Light!" One of us would pick him up and hold him so he could reach the switch and flick the lights. I remember being amazed by David's detailed description, when he was only three years old, of how the current flowed from the switch through the wires in the wall to the light bulb.

David is still reading his book, whis-

\* "Time-out hall" is a place; "hall time-out" is a punishment. There is also chair time-out (a punishment) and a time-out chair (an object).

pering the words to himself and tracing his fingers along the page. Tonight he's reading the instruction manual for his Super Nintendo Super Mario World game. His father and I pooled our resources and bought David that as a Christmas present. He has been sleeping and eating and talking Super Nintendo ever since. The instruction manual is his favorite book.

I watch him reading for a moment, but don't say anything. It's best not to distract David when he's in bed. Otherwise, he becomes too excited and starts getting up and wandering around the house. Coaxing him back to bed again can be a major chore.

I am thankful David can finally sleep at night. He didn't sleep through the night until he was nearly six years old. It used to take us several hours of struggle just to get him in bed. It's only been in the past year or so that David has been able to stay put after an elaborate bedtime ritual which has, mercifully, shortened over time.

David still needs his rituals, though they seem to be shrinking. Not so long ago we had to give him just the right plate and just the right cup and just the right spoon in order to prevent a tantrum. He still uses only certain place settings, but at least his repertoire has broadened. If I somehow forget, he now asks me for the right ones in a strained and upset voice instead of screaming at me and hitting me. It's an improvement.

Every day when David comes home from school, I ask him to take off his coat and his socks and shoes. He still needs to be reminded. Then he goes in the bathroom and washes his hands. Lately, he's been getting his own snack; a few months ago, I had to do that for him. He needs this ritual to make the transition from the world of school to his home. Last week I was surprised to find my picture drawn in blue crayon in his class's book of heroes. The caption read, "My Mom is my (hero) because she lets me have any snack I want."

I walk into the living room and turn on the tv. Ned, David's father, is already

asleep. The living room and playroom look like they've been struck by a miniature tornado. I sigh and think of the mess I'm going to have to clean, when I finally have the energy for it. David and Ariel still don't know how to put up their toys unless I stand over them and supervise. Most days, it's just easier to do it myself.

Our carpet is usually grungy because David can't stand the sound of the vacuum cleaner. For the first five years of his life, he couldn't tolerate the sounds of any buzzing motor. Which meant we went for years, without using the vacuum cleaner, blender, dishwasher, electric can opener, mixer, and any number of other helpful household tools. We've finally gotten David acclimated to the dishwasher and Ned's electric shaver. But I spent so long listening to David's panic-stricken tantrums in response to machine noises that the vacuum now makes *me* tense. And I mix things by hand.

I sit down on the couch and forget about the tensions of the day. David's autism follows me around all the time, but I usually try not to think about it. It's become like a piece of hair that keeps getting in my eyes, this realization that David is unlike other kids. Most of the time, I brush it away without noticing it.

For the first four years of David's life, I could not brush his differences aside. When David's behavior was unusual or strange, everyone else was quite willing to see me as the reason for it. In this culture, mothers are presumed to be the cause of most of their kids' problems, especially when the children are little.

I separate my time with David into Before and After. Before the diagnosis, I lived in a constant state of groping for explanations and trying to hide his oddness when it manifested itself publicly. I felt a deep sense of shame and fear. Shame that there was obviously something very wrong with me if my son was so different from the other kids. Fear of having my inadequacies found out.

That time was so hard for me that I hate to think about it, much less talk about it with anyone. I took a parenting class, read books, talked with doctors, saw specialists, saw therapists, took David to so-called experts over and over again. The general consensus, until he was four, was that David was a "high-demand" child but that there was nothing wrong with him. I was regarded as a "high-risk" mother. I still remember glancing at one of David's charts at the doctor's office and seeing the words "considerable stress in the mother." I remember telling a doctor about David's awful tantrums when he was three. The doctor's response was, "Learn to control your rage." But I felt no rage toward David. I simply felt lost about how to deal with him. None of the techniques I'd read about worked with him. I eventually stopped reading child development books because none of those kids sounded like David and I couldn't bear the pain of seeing the differences.

My life before the diagnosis is etched in my mind in stark detail. Every little failure still vibrates through my body when I remember. The long sleepless nights when David was a baby. His inconsolable cries. The way everything in his world bothered him. The way he avoided other kids. The impossible task of trying to potty-train him. The hostile looks I got in public. My mother's admonishments to clean the house more and take him out more. My ex-mother-in-law's secret attempts to persuade Ned to have my custody removed. Being asked to vacate my apartment — the neighbors were convinced I was beating up on David since he cried so much. Avoiding other mothers because they could see that my son was not like their children. David staring forlornly out the window at the other kids playing, unable to find the resources to join them. The piles of toys and stuffed animals David got every Christmas, with which he refused to play — he was more interested in the boxes and wrapping paper.

As an infant, David refused to sleep in his bassinet. Ned and I rigged up a tiny

**By the time Ariel was a month old, I began to realize that David's difficulties weren't all my doing. I was the same mother I had always been, but Ariel was a very different baby. She slept through the night in her bassinet, enjoyed her bath, and had a predictable schedule. She calmed when I held her and didn't protest when I dressed her.**

cradle for him, a mesh-sided basket with a mattress, in our bed. David would fall asleep in my arms — the only place he *could* fall asleep was in my arms — and then I would tuck him into the cradle and pack rolled-up receiving blankets around him and wedge a hot water bottle into the cradle with him. We put the cradle near the foot of the bed between us.

I remember the fear with which I came to regard every little task I did for David. He cried when I changed his diapers, dressed him, put him down, or bathed him. He refused to eat his solid food, so I delegated that chore to Ned when I could. I also came to let Ned bathe him. After being alone in the house with a crying baby all day, I needed Ned's help, and he willingly gave it. I was the one who woke up with David at night, though. Since David needed to be nursed every hour and a half for the first six months of his life, and since he only seemed able to fall asleep in my arms, I was pretty tired.

I remember when we trained David to sleep in a crib. We explained to the doctor that David refused to sleep in his crib, and the doctor gave us instructions. We were to leave David in the crib, despite his crying. David was to be alone in the room and we were to check on him every fifteen minutes. We soon discovered David was capable of crying the entire night and still being awake the next day. It took six weeks of completely sleepless nights before David resigned himself to his crib. Even

then, he woke up every two hours and needed to be comforted or he wouldn't sleep at all. Ned and I took turns sleeping on the floor of David's room, holding his hand.

This situation lasted until David was almost four. Ned and I separated when David was two years old and lived apart for nearly a year. The nights when I had David — four nights a week — were much harder then. But at least I had the other three nights to catch up on my sleep. Those were the first undisturbed nights I'd had since David was born. I needed them.

I brush these memories out of my mind and settle in to watch *Casablanca* on the Disney Channel. Tonight is salute-to-Bogey night. I lose myself in the black-and-white images from another age. At four AM I wake up and realize I have fallen asleep on the couch again. I head to the sanctuary of my room. Wednesday morning dawns to noises of Ned getting David and Ariel ready for school. This arrangement is a hold-over from the days when I was waking up six or more times a night to tend to David's restlessness and Ariel's ear infections. I've never regained normal sleep patterns, so I'm glad for the respite Ned provides. Some mornings, when things are running late, I get up to help him. Today I lie in my bed, listening to the sounds the kids make. David is crying again because he doesn't want to wear the clothes Ned picked out for him. David refuses to wear patterns or clothes with brand names on

the front of pants that fit him too tightly. We must be running toward the end of the laundry pile, because Ned is insisting David wear a checked shirt and David is resisting. I get up to help.

Our kitchen has a little laundry nook off to the side. Laundry is piled up in baskets on top of a little lace-covered table where we never sit, despite the chair tucked under it. I sift through both baskets before finding a blue t-shirt that David can live with. "Here, David. Put this on." "All right," he says, looking mollified. Ned asks, "Could you get Ariel ready? She hasn't had breakfast yet and I need to take David in now." Ned has to drive David to school in the mornings because our house is at the beginning of the bus route for the special education students and David doesn't do too well when he's been sitting on the bus for an hour before he hits the classroom. "Sure," I say. David and Ned take off and I am left alone with Ariel.

Being alone with Ariel is relatively easy. She's usually cooperative and she tells me what she wants. I breathe a sigh of relief after giving David his morning hug, and bring Ariel back to the kitchen with me. And when Ariel leaves for preschool, I have the morning to myself. I'm still not used to having free time. I pace around the house a bit and pick up toys, bits of paper, and pieces of clothing. The stillness is daunting.

Ariel was born just one month before David turned four. I'd spent a couple weeks in bed with a virus and a severe



sinus infection I couldn't shake. Pregnancy always did this to me — destroyed my immune system. David was none too pleased that I couldn't give him all the attention he needed. He didn't understand why I couldn't take him on walks so much, or spend as much time drawing for him and reading to him. I tried to explain that Mommy was sick and was also going to have a baby soon. I showed him ultrasounds of his unborn sibling. I took him with me to see my obstetrician. I asked him to name the baby for me. He called it "Harn."

A week or so before Ariel was due, we took David on a hospital tour for young siblings-to-be. David threw such a tantrum during the classroom session that the tour guide asked us to take him into the lobby until he was calmer. We sat there on a bench with him, trying to explain why he needed to exert self-control in front of the other kids. He wasn't buying it. The tour guide came out of the classroom with the other kids and their parents. She gave us a pitying look and came up to me. "You may join us for the rest of the tour, if you like." The other parents gave us sidelong glances as we rejoined the group. I pretended not to notice.

David loved looking at the nursery. He was fascinated by the tiny babies in their plastic cradles. "Why are they crying, Daddy?" he asked his father. Ned held David up to the glass a little higher and tried to explain. "The babies are crying because they can't talk yet." David looked at Ned doubtfully.

The final stop on our tour was a birthing room. Our guide had managed to coax several children onto the bed and was demonstrating how the controls worked. Some of the other kids became frightened and jumped off. Not David. The woman was trying to get the kids to push the buttons on the control panel. David took it from her hands and began moving the bed parts around like the expert he was. The other parents looked impressed and gathered around him. Some of them were smiling with relief. The tour guide said something like, "What a smart boy." The parents

nodded. Then it happened. David said, as loudly as he could, "FUCK!" There was no saving face after that. The tour ended in ignominy, with the other parents shying away from us. David did get a t-shirt out of the deal.

I remember the day David met his little sister. The night before I went into labor, my mother had flown in to take care of him. I had decided not to include him in the birthing process because I didn't think he could tolerate the stress, the blood, and seeing me in pain. My mother brought David to see me the evening after Ariel was born. I was lying in my hospital bed and Ariel was in a clear plastic cradle on a cart next to me. David charged into the room calling, "Mommy!" He reached up his arms. I told him Mommy couldn't pick him up just now but he could climb into my bed with me. Instead of scrambling up, he turned around and pointed to his sister and said, "What's that?" Then he started to cry. It was the first time I had ever seen him express sorrow. I pulled his head onto my lap and mutely began stroking his hair. It took David years to forgive me for bringing his sister into our home.

By the time Ariel was a month old, I began to realize that David's difficulties weren't all my doing. I was the same mother I had always been, but Ariel was a very different baby. She slept through the night in her bassinet, enjoyed her bath, and had a predictable schedule. She calmed when I held her and didn't protest when I dressed her. Having Ariel around was a revelation. It seemed I could be a competent mother, after all.

A little neighbor girl, a frequent visitor to our place, brought a five-year-old Asian boy with her one day. I opened the door and there was Jillian, smiling like she was delivering a present. "This is Alan," she said. "I brought him to visit David." David frequently stared out the window at the other kids playing, but never joined them. Jillian was his only playmate. She was eight years old. David had joined me at the door and was staring at the little boy. "Hi," Alan said. David responded by gibber-

ing at him unintelligibly. This behavior was not uncommon for David, especially when he was nervous. I tried to make excuses for him, but the boy interrupted. He rolled his eyes and said, "I'm getting outta here! That kid's weird!" He turned and ran away. Jillian looked up at me apologetically and followed him.

I thought about that incident for a few days, then decided it was time to take action. We'd just started seeing a new pediatrician. Most of his attention went to Ariel, because she was still a newborn. I don't know what made this visit different from all the others. Maybe it was my sense of inner certainty: I had resolved to face the problem, whatever it was. Maybe it was my growing suspicion that some of David's problems lay within David.

Ariel was in for one of her new-baby checks. I stopped the doctor before he was finished with her and said, "We have a problem with David. He's not like Ariel. He was different from birth." The doctor shook his head and said, "I don't know." I told him about our difficulties potty-training David, his poor eating and sleeping habits, his terrible tantrums. The doctor gave us some advice about locking David in his room until David calmed down. "We already tried that," I said. "It doesn't work." The doctor told us to try it again, and not let him out, no matter how long he cried, until he was quiet. Then he asked us to bring David back in a month and tell us how things went.

The next month dragged by. Ned bought a lock for David's door because David would try to escape if we didn't lock him in. Before the lock, one of us had to hold onto the doorknob until David cried himself out. It was a wrenching experience. David would scream behind the door and bounce up and down on his toes until they bled. The pain didn't stop him. I would look at his wounded feet and guilt would shoot through me. We couldn't keep the bandaids on his toes.

Potty-training wasn't going well, either. David's doctor had recommended

*Continued on page 26*

If you suspect your child has autism, first take him to your pediatrician. Since pediatricians aren't always familiar with current autism research, ask for a referral to a developmental pediatrician. Even going to teams of autism experts, it took us over a year to reach a decisive diagnosis with David. The field is changing rapidly. Your best second step would be to take your child to a child development center or to a major medical center that specializes in autism research. A psychotherapist or play therapist experienced in working with autistic children can also help you evaluate your child and make referrals. Finally, you may wish to contact the NAS (National Autistic Society), NSCAA (National Society for Children and Adults with Autism), or MAAAP (More Able Autistic People).<sup>1</sup>

You should keep a few things in mind while going through the evaluation process. Many childhood disabilities and emotional disorders resemble autism, especially in very young children. Among these are symbiotic disorder, reactive attachment disorder, and nonverbal learning disabilities (to name a few). Your child may not have autism, even if he has some autistic features. The younger your child, the harder it is to make an accurate diagnosis. The earliest conceivable age for an autism diagnosis is two years old, and a reliable diagnosis for classic autism usually isn't possible until at least age three. Most Asperger's Syndrome children aren't diagnosed until grade school, because of their relatively high level of functioning. Early intervention is associated with a more positive outcome for your child, but intervention is not possible without an accurate diagnosis. So you need to balance accuracy and urgency.

Remember: you are the parent; no one knows your child better than you do. The experts are there to help you evaluate and work with your child, but they do not have your intimate experience with him. If a diagnosis feels wrong to you, say so; be sure to ask plenty of questions and, for a diagnosis as sig-

# If You Think Your

nificant as autism, insist on a second or even a third opinion. Don't stop until you are satisfied that what you are being told is what's really going on. Good child development specialists view the parents as partners in diagnosis and treatment. Your evaluation team should pay attention to your concerns and opinions. The people who treat your child should both cooperate with you and include you in the process. Try to work with these people; if you can't, you may be better off having your child seen elsewhere. Getting an accurate diagnosis is usually necessary in order to find appropriate help for you and your child.

Once you have a diagnosis, your school district should be able to help you find special classes and other support services. Make sure your child is placed in a communication- or language-enhanced classroom with a small ratio of students to teachers (not more than 12:1 for older autistic children; closer to 3:1 for very young autistic kids). Your child will also need speech therapy with an emphasis on pragmatics, and occupational therapy focusing on physical defensiveness and motor clumsiness. In California, a network of case-management centers (called Regional Centers) finances additional services for persons with

## Myths

Over the years, I have encountered a number of myths about autism and the people who suffer from it. The first and biggest myth was the "refrigerator mother/empty fortress" model of autism, which postulated that interactions with a severely rejecting or cold mother created autism in young children. The thought was that autistic children rejected the world in response to an emotionally hostile early environment. This theory has been disproved by extensive studies of the families of autistic children. Parents in families with autism appear no different from other parents — except that they tend to be more depressed and to have higher rates of divorce than parents of normal children. Parents of other severely handicapped children, including deaf and physically handicapped kids, show similar patterns of depression and familial disruption. These findings can more easily be attributed to the stress of

raising an autistic child than offered as an explanation for autism, though they may aggravate the autistic child's preexisting condition.

A myth I've heard in various forms is that autistic children are extremely bright, or are in some way possessed of special insights. Higher-functioning people with autism sometimes have interesting ways of expressing their perceptions of the world, but these are more a reflection of their idiosyncratic use of language and the difficulties they tend to have with higher orders of symbolic thought. Eighty-five percent of classically autistic children are mentally retarded. Autism is essentially a form of linguistic, social, and intellectual dis-

# Child Has Autism

developmental disorders and their families. These centers are suffering from major funding cutbacks, so their aid has recently been curtailed. We also receive some support from the county we live in, which has an early-intervention program in the schools. There are some private schools for autistic children, but they are usually quite expensive. And most private schools don't have the resources to meet all the special needs of their students. The public schools usually have better special-education programs, overall, than does the private sector.

If your child does have autism, try to remember that persons with autism often can still form emotional attachments, can still experience happiness, can still create wonder in their parents' world. Dealing with autism can be very difficult, but those moments when your child smiles or makes a connection with you or learns something new can be especially gratifying. Don't give up hope. We may be able to understand and even medically treat autism in our lifetime. The future isn't written yet. ☺



1 MAAP Services, Inc.: P. O. Box 524, Crown Point, Indiana 46307. Publisher of the MAAP (a newsletter for More Advanced Autistic People; Susan Moreno, Editor).

Autism Society of America: 8601 Georgia Avenue, Suite 503, Silver Spring, MD 20910; 301/565-0433. Publisher of the *Advocate* newsletter.

Autism Society of California: 812 J Street, Sacramento, CA 95814; 916/441-1243.

# About Autism

ability. Some exceptional autistic people have developed remarkable abilities in areas not affected by their autism, like numerical calculation, music, and art. Commonly, an autistic person exhibits great disparities of ability and disability. The areas in which an autistic person is most proficient are commonly called "islets of ability," and can give the illusion of greater intellectual functioning, overall.

Another common misconception is that people who suffer from autism are simply emotionally isolated from the world. This myth has a couple of different manifestations. The first is the belief that autistic people cannot form emotional bonds. It is true that

some cannot, but many do; people with autism have social impairments, but they can love and feel lonely and even be attracted to another. The defining factor in autistic social interactions is that they tend to be unusual and awkward. Autism does not necessarily mean complete social disinterest. Similarly, some folks think that, aside from their seeming unreachability, autistic children are internally intact. People who believe this myth are constantly looking for the magic key that will open the autistic person up.

But autism is not fundamentally an emotional disorder. It is a developmental handicap that impairs the ability to process social and linguistic

information, including the autistic person's emotions and those of others.

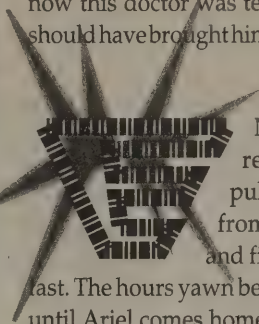
Finally, some seem to think that autism is curable. Right now there is no cure for autism, but it can be managed. That is, there are ways to help an autistic person cope with his disability and lessen its effects on his life. Autism manifests itself in various ways over a lifetime. In a few cases, great improvements have been seen. These do not necessarily indicate the absence of autistic features in adulthood, but merely indicate a lessening in the severity of the symptoms. Autism is also sometimes misdiagnosed, so that someone who never had autism in the first place may later appear to have recovered. Deaf children are often misdiagnosed with autism, because both conditions interfere with the acquisition of spoken language and, inevitably, with socialization. ☺

that we try to control David's diet. That approach didn't work. If we gave him foods he didn't like, he gagged on them. We couldn't force him to drink Metamucil, either. He was partially potty-trained at three-and-a-half, but he refused to move his bowels. This was a real problem, because he would hold it in until his stool became so hard it made him bleed. David would sit on the potty interminably, crying and trying to wipe the feces out of himself with his fingers, then wiping his soiled fingers on the bathroom wall. I would sit with him and talk to him and try to coax him to push it out. Sometimes I would sit on the floor beside him and hold his hand while he cried. I used to say to him, "David, everybody in the whole world has to go poopies. I know you don't like it, but you gotta do it. If you don't, it will only hurt worse."

At the end of the month, we went back to the kids' doctor. His first words to us were, "How did it go?" We told him there was no improvement. He nodded and looked at the floor, the walls, the ceiling. Taking a deep breath, he said to me, "I think your son has autism." I said nothing. The doctor averted his gaze again and said in a guilty voice, "You've been seeing me how long now?" We told him. "You should have brought him to me sooner."

We had been taking David to doctors since he was a newborn. I'd been telling them about our problems with him all along. When David was a year old, we'd spent a few months going every two weeks to the Child Development Center at the local hospital because of his sleep problems. From the time David was one-and-a-half until he was nearly three, we'd had a child development specialist visit our home for two hours every week to help me with my parenting; the people at the Center had determined that I was a "high-risk" parent. They never said for what, but I took it to mean I was at risk for abusing my child. I'd spent years trying to teach myself how to be a good mother to David. I'd spent years viewing myself as abusive or neglectful in some hidden way that Barbara, our therapist,

didn't see. I'd examined my every depression, my every fear, my every moment of exhaustion to see how they could have possibly affected him. And now this doctor was telling me, "You should have brought him to me sooner."



didn't see. I'd examined my every depression, my every fear, my every moment of exhaustion to see how they could have possibly affected him. And now this doctor was telling me, "You should have brought him to me sooner."

N O U G H remembering. I pull myself away from the window and fix a little breakfast. The hours yawn before me, empty until Ariel comes home. I light a cigarette, get a murder mystery from my room, and sit down on the couch. I still feel guilty when I read, but I let the convoluted lives of the characters draw my thoughts from my failings as a housewife.

Wednesdays are David's days to see his play therapist. David sees several therapists now. He has his play therapist on Wednesdays and his guided play group on Fridays; his behaviorist comes in once a month for three hours. Barbara no longer comes to our home, but I see her privately to work through the abuse issues from my own childhood: the issues that allowed me to take the blame for David for so many years. We get some of these services free through the county. We belong to a case-management center for developmentally disabled people and their families, but this group is of little help to us these days because its funding has been cut back. We did get our behaviorist through them, though, and they contact us once a year to keep track of David's progress.

Now I am remembering the time After. Ariel is home from preschool and is sitting down in front of the tv watching "Noozles." She is four years old, the same age David was when we got his diagnosis. She can already feed and dress herself and her little tantrums seem insignificant next to the ones he had at her age. Her show is just ending. "Mommy, will you read to me?" she asks. "OK, honey."

The months following the visit to the pediatrician are a blur in my mind,

punctuated by trips to one team of experts after another. They all seemed to disagree with each other; I was determined to find out the answer if it took us years and bankrupted both Ned and me. (It did almost bankrupt Ned, because these evaluations weren't covered under David's medical insurance.) We had hundreds of pages of questionnaires to fill out. I was the one who answered those, since Ned was paying for the doctors. Every place had its own forms to fill out. Every place wanted to know the minutiae of David's bathroom and eating and sleeping patterns, his developmental milestones, his medical history. We'd never kept a baby book on David — we hadn't had the spare time. Medical records and our memories would have to be enough.

One incident stands out as a respite from all the confusion. I'd taken David to the little park down the street from us. Ariel was sleeping; Ned was home with her. (We had never found a babysitter who could handle David, so Ned and I took turns watching the children. We were divorced by then, but we were still housemates. I couldn't afford housing on my own, and I needed his help with the kids.)

David and I were walking in the park and he stopped suddenly and stooped to inspect a flower. Something flew up from the flower and he made a grab for it. "What is it, David?" I asked. He didn't answer me, so I came closer. David was staring at something he held in his hand. I looked down and saw it — a tiny white butterfly, caught by the wings between his thumb and forefinger. He was smiling at the butterfly, enraptured. The insect didn't move between his fingers. Then David opened his hand and let it go. The butterfly flew away, unharmed.

David's bus arrives just as I'm finishing Ariel's third book, *Ballerina Bunny*. He pounds on the door with his fists and rings the doorbell. Then he begins to cry. "Hold on, David," I say, "Mommy's coming." I unlock the deadbolt with the key we hang on a hook near the living-room ceiling. Locking up like this has become a habit with

**David has autism. It's an organic condition he was born with. There was nothing we could have done to prevent this.**

**Nothing we did caused it.**

**After the realization set in, there was relief, for me. I stopped feeling guilty. I stopped feeling lost in his world. I had my answers, some of them.**

me since he started bolting out the front door and down the street when he was five years old. One time, he took Ariel with him. She was a year old and barely walking. I was in the bathroom when I heard the front door open. "David!" I called through the closed door, "Stay in the house!" Silence. I jumped up and ran into the hallway. The front door was open and the children were gone. Zipping my fly, I headed into the front yard and looked up and down the street. David was half a block away, running down the sidewalk. Ariel was toddling into the street. I scooped her up and carried her along with me as I chased after him, calling his name. He ignored me. He was at the end of the block before I finally caught up with him. I had to grab him by the collar of his shirt and drag him back by his wrist, screaming and pulling against me, Ariel hiked up against my other hip. We bought the deadbolt that night.

I open the door and let David into the living room. His newest bus driver waves at me and I wave back at her. Then I close the door and lock us all in the house again.

Today is a better day than yesterday. After his initial panic at my slow response, David settles into the household routine. He removes his shoes, socks, backpack, and jacket, then traipses to the bathroom to wash up. Ariel joins him. She usually has a snack when he does.

The two of them sit at the table munching on Hydrox cookies, one of the few

treats they both like. They aren't saying much, just eating and smiling. "Mommy, can I play Super Nintendo?" David asks. "Sure," I say, "After you finish your homework." David returns contentedly to his cookie. I pull out a cigarette and join them.

After their snack, David and Ariel go into the playroom. They begin playing "magical super baby," a game David invented. David tells Ariel to cry and she screams very loudly and he pretends to fall over. Both of them are giggling. I light another cigarette at the kitchen table and watch them through the doorway. I look at the clock on the microwave. It's nearly four PM and no fights or tantrums so far. Soon Ned will come home to take David to his therapist. Just one more hour until Ned walks through the front door to cries of "Daddy's home!" I think we'll make it without the time-out hall today.

I remember the moment I became convinced David had autism. We were about six months into the evaluation process, and yet another specialist was telling Ned and me, like the pediatrician before her, "I think David has autism." The room suddenly became very narrow. I was sitting down, but I couldn't feel the chair beneath me. I looked at the specialist through a yellow fog. I stopped comprehending her words. She talked on and on and I only caught bits of it. Her voice echoed in my head like she was talking in a tunnel.

I'd had such dreams for David. He was

a beautiful child; people used to stop us on the street and remark on how lovely he was. He had perfectly symmetrical features. He had soft shining hair. He had big melty eyes. He was smart and he was affectionate and I'd made up my mind not to make the same mistakes with him my parents had made with me.

David has autism. It's an organic condition he was born with. There was nothing we could have done to prevent this. Nothing we did caused it.

After the realization set in, there was relief, for me. I stopped feeling guilty. I stopped feeling lost in his world. I had my answers, some of them.

Ned took quite a while to accept the diagnosis. My family took even longer. Ned's parents didn't accept the label at all until last year. They held steadfastly to the belief that my parenting and the divorce that I had initiated were the cause of all David's troubles. My grandmother still thinks David has just been going through an eight-year "rough spell."

I have only cried two times about David's condition. The first time was when we were going to yet another specialist to evaluate David. They were evaluating his language and the only thing he could talk about was lights. He averted his gaze, slipped away from my touch, repeated himself over and over. The language specialist sat across the table from me, explaining how David's language was very repetitive

# Asperger's Syndrome

and nonrelational. I looked at my son, who was playing with the light switch. I thought of all the dreams I'd had for him, all the hopes I'd had of friendships and college and marriage and grandchildren. And I knew those dreams were not to be. I broke down in front of that woman and I couldn't stop the tears from coming out of me. She didn't know what to do or say. There was panic in her eyes. She finally said to me, "We have so much invested in our children, don't we?" I wanted to hit her.

The second time I cried was after watching an episode of "L.A. Law." This family had just given back one of their two adopted children. The child they threw away was so much more normal than David, so much less destructive, so much more *whole*. I looked at those people as they gave their child away, tears in their eyes and screams in his throat because he just wouldn't do, and I realized there were times when I wanted to throw back my David, too. I realized this yearning in me and I felt heartbroken for him and for myself. I went into his bedroom and wrapped my arms around him and cried until I was hoarse. He never stirred.

Living with David's autism has cast a shadow over my life. It is my private tragedy. But it doesn't have to be his. Most days, he is happy. Most days, he feels loved and wanted and important to the world. In the end, that's all I could have ever hoped for him.

I don't know how he will turn out when he's grown up. I try not to think about that too much. The future is too vast and too far away. We take each day as it comes, my children and I. Some days are better than others.

I hear Ned's key turn in the lock. David and Ariel jump off the jungle gym in the playroom and run to the front door. No hall time-out this afternoon.

Today is shaping into a good day. ☺

I did not list all of David's autistic symptoms in my story, because I felt it was more important to give a sense of my experience as his mother. Autistic-spectrum kids are different from normal children in an almost endless variety of subtle ways. It was impossible to demonstrate all of David's idiosyncracies in one relatively short piece.

What is autism? Simply put, it is an inborn organic condition that affects a child's communication (both verbal and nonverbal), relationships (social interaction), and higher orders of symbolic thought (most easily observed through symbolic play). Autistic disorders run the gamut from classic autism (usually accompanied by significant mental retardation) to a series of less debilitating conditions that are classified as PDD (Pervasive Developmental Disorders). There is still a lot of debate among the experts about what symptoms, precisely, should qualify as autism, and about where autistic disorders blend into the realm of normality. Asperger's Syndrome children tend to fall on both sides of the line demarcating classic autism from milder forms of PDD.

The most concise criteria I have found for classic autism are the following:<sup>1</sup>

1. Autistic social dysfunction: gross and sustained impairments in socialization and social relations, as defined by impairment in at least two of the following areas:

- a. Attachment [or expression of attachment]
- b. Sociability and social communication
- c. The expression and understanding of emotions

<sup>1</sup> These are taken from the *Handbook of Autism and Pervasive Developmental Disorders*, Cohen, D. and A. Donnellan, Eds. (V. H. Winston & Sons and John Wiley & Sons — Wiley Interscience Publications, 1987).

2. Gross deficits in language in either of two types:

- a. Mutism
- b. Peculiar speech patterns, such as echolalia [repeating words or phrases that come from another source as if they were original utterances], pronoun reversal [e.g. calling self "you" instead of "me"], concrete or idiosyncratically metaphorical language use, mechanical intonation

3. Impairments in communication in both of the following types:

- a. Nonverbal communication: impairment in use or understanding of gesture, gaze, vocalization, and facial expression
- b. Verbal communication (when speech is present): impairment of ability to define the shared topic, establish rapport verbally, maintain a dialogue, take turns, understand implicit messages in requests, and in other aspects of verbal interaction

4. Associated features (one or more of the following associated features may be present):

- a. Resistance to change in the environment
- b. Insistence on doing things in the same way
- c. Oddities of movement, such as posturing, repetitive hand and finger movements (stereotypies),<sup>2</sup> toe-walking, peculiar gait
- d. Self-mutilation, such as biting or hitting self or head-banging
- e. Excessive fascination with or

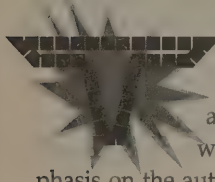
<sup>2</sup> This odd, correctly spelled word is used by the experts to describe certain kinds of movements seen in autistic and other developmentally delayed children.

# and the Autistic Spectrum

attachment to inanimate objects

f. Deviant responses to sensory stimuli (augmented or attenuated behavioral responses to noises, textures, odors, lights, taste)

g. Absence of imaginative play.



HERE ARE competing theories about autism. Some people would place more emphasis on the autistic child's unusual response to sensory stimuli. Others would focus on the autistic child's absence or impairment of imaginative play. By either of these standards, David has autism, but it's been a chore for us to sort through all the various theories. The two aspects of autism that are universally accepted as definitive are the autistic person's impairments in communication and socialization. Because there is still so much controversy over the causes and manifestations of autism, trying to find explanations and classifications for a high-functioning autistic child can be very difficult.

A certain amount of overlap occurs between high-functioning classically autistic (Kanner's Syndrome) kids and lower-functioning Asperger's Syndrome kids. Each syndrome has a characteristic pattern of strengths and weaknesses. These patterns can change as a child ages; the younger the child is when diagnosed, the more unpredictable the outcome. People who look like Kanner's Syndrome children sometimes progress to the point where they look like Asperger's Syndrome adults.

Autism specialists are still debating where Asperger's Syndrome falls in the autistic spectrum. It is not clear whether Asperger's Syndrome is a low-functioning form of PDD or the highest-functioning form of true autism. Current thinking leans toward the true-

autism classification. With new knowledge, many of the old categories are being revised.

Asperger's Syndrome is different from other forms of autism in that the linguistic impairment is less severe than in most people with autism; there is an accompanying tendency toward clumsiness or poor motor coordination. Asperger's Syndrome kids also have near-normal to above-average intelligence. They develop good grammatical speech early in life, though they do display significant difficulties with linguistic pragmatics (the practical use of language in interactions with others), semantics, and comprehension. Socially, Asperger's kids appear odd or subtly inappropriate. A child with Asperger's Syndrome may fit the description for classic autism, but many Asperger's kids are more mildly affected and are thus given the PDD label. Since Asperger's Syndrome is a relatively new diagnosis in this country, it is only now finding its way into mainstream medical literature. There is almost endless variation among autistic-spectrum individuals, so classification along the spectrum is not always easily done.

Autism is very rare. Given the broadest interpretation of the autistic spectrum, it is found in roughly 15 out of every 10,000 individuals. Classic autism is only found in 4 out of every 10,000 people. The vast majority of people with autism are male — about 4 persons in every 5.

The exact cause of autism remains a mystery. People with autism may experience some sort of inability to process sensory information that critically affects their absorption of social information at key stages during their intellectual development, or they may be born without the intellectual capacity to process thought at a sufficiently subtle level to decode nuances of lan-

guage and emotion in themselves and others. Autism specialists do not know whether the deficits found in autism are due to minute structural, biochemical, or neurological damage to certain areas of the brain. There is some evidence for a genetic component to autism, but that is still being studied. Autism has been shown to be organically, and not environmentally, triggered. It is apparently present at birth or very early infancy. But that is about all we know for sure.

Since the precise mechanism of autism has not been discovered, we don't know whether science will find a cure or medical treatment for it. Several approaches have proven helpful in working with autistic individuals. Especially with young autistic children and lower-functioning adults, behavioral modification is a good training tool. Higher-functioning autistic people do well with guided small-group interactions, and with aids such as videotapes that present conversational techniques and lists of social rules they can memorize. Severely language-impaired autistic people can sometimes communicate via sign language, or through the use of a keyboard or symbol board. Conventional psychotherapy, music therapy, or play therapy, with a therapist experienced in working with autistic disorders, may help some autistic people to integrate their life experiences with their emotions. Psychotherapy can also alleviate the intense episodic anxiety commonly experienced by higher-functioning autistic children. Many experimental treatments are being explored these days, from holding therapy<sup>3</sup> and facilitated communication to dietary restrictions and megadoses of certain vitamins. As yet, none of these experimental treatments has been shown to cure autism, though some may mitigate the severity of its symptoms. ☺

<sup>3</sup> See review of *Holding Time* (WER #75:16).

## Autism and Asperger Syndrome

This highly academic book may not interest the general reader, but it was like water in the desert for me. It's the first book I have found devoted entirely to the examination of Asperger's Syndrome and its relationship to autism. While it isn't always pleasant reading, I found the text informative and fascinating.

The book is a collection of research papers by seven authors. Although scholarly, the papers are very readable, especially for someone conversant with the basics of high-functioning autistic-spectrum disorders. Chapters cover: an analysis of Hans Asperger's pioneering work with kids suffering from the syndrome he identified, Asperger's original paper on the syndrome, a comparison between Asperger's Syndrome and Kanner's autism, family studies of Asperger's subjects, a description of Asperger's symptoms in adults, and analyses of the social and linguistic handicaps present in people with Asperger's Syndrome. Some chapters include writings by autistic and Asperger's subjects; others contain specific tests that characterize the differences between autistic social dysfunction and normal social perception.

Since Asperger's Syndrome and autism are still hotly debated topics in psychiatry, it has been difficult for us to get straight answers about the disorder that has so deeply affected our son's life and our own. This book offered us the first clear explanations, not only of which traits are specifically confined to Asperger's Syndrome, but also of what Asperger's Syndrome looks like in adults, how Asperger's Syndrome appears to be related to classic autism, and the brain processes whose impairment causes the condition. Helpful advice is scattered throughout, including suggestions for how to interact positively with your Asperger's child and ways in which Asperger's Syndrome may be clinically managed. Its specificity, clarity, and depth make **Autism and Asperger Syndrome** the best reference we have found about the syndrome. —Carrie Lay

Those Asperger-type individuals who have found effective ways of coping in social and communicative interactions and still retain their autistic oddness present a great challenge for theory and practice. . . . I shall . . . explore the hypothesis that we are looking at compensatory learning in the presence of a severe deficit rather than at a very mild form of deficit. In line with this hypothesis I propose that well-adapted Asperger syn-

drome individuals may have all the trappings of socially adapted behaviour, . . . but yet may not have a normally functioning theory of mind. The hypothesis allows us to describe behaviour as resembling the normal pattern but arising from quite abnormally functioning processes.

How far can they go?

An exceptionally well-adapted and able autistic person resembles that imaginary creature, the mermaid, of Hans Christian Andersen's fairy-tale. The mermaid, who was in love with a human prince, desired to take on human form, but could do so only at considerable cost. She had to sacrifice her voice to gain legs but when she moved it was like walking on knives. As she was unable to communicate, those around her did not understand her true nature. This led to the prince marrying someone else, and to her own failure to gain a place in this world.

Superficial resemblance to normality is, as case histories in this volume show, within the reach of at least some Asperger individuals. It may well be that this capacity to achieve near-normal behaviour is the single most distinctive feature of Asperger syndrome as opposed to other forms of autism.

It is possible for the Asperger person to learn social routines so well that he or she may strike others as merely eccentric. They would not consider that there was anything wrong with them. Of course, such hard-won adaptation is achieved only at a price. The Asperger person will have had to learn with great effort what others absorb quite naturally. He or she will have needed unstinting help and a high degree of motivation. Unfortunately, achievements bought at high cost are often fragile, and he or she will have to run where others stand still. The question arises whether such gains are worth the high price. One has to acknowledge too that not all Asperger syndrome individuals can achieve near-normal social integration for all their strenuous efforts.

Just how high is the cost, and how much effort is being spent in keeping up appearances? Often outsiders do not appreciate that there is a cost at all. Parents must find it irksome to be told by someone who has seen their Asperger son or daughter for a brief and pleasant interview that they are fussing about nothing. If the family members bring up anecdotal examples of difficulties, they will probably be told that these are normal problems that could happen to anybody. For instance, they may mention the embarrassing occasion of an autistic adult sitting in a crowded underground train and readjusting his or her underwear. "So what?" comes the well-meaning but naive reply, "Anybody in extreme discomfort might do this!" As for the charmingly hu-

morous example of the autistic man who always forgets to take off his bicycle clips, the standard comment is "Well, which bicyclist hasn't!"

Many examples of Aspergerish behaviour — to do with being oblivious of other people's reactions or with being over-concerned — can be cited, but there is always a retort handy that implies it is nothing out of the ordinary. Even the more outlandish examples, such as the young man who came down naked to a living room full of visitors asking where his pyjamas were, can be put down to a healthy disregard for stuffy conventions. In terms of behaviour the autistic person can be so well camouflaged that his or her occasional slips are generously discounted. Is it truly generous to overlook such problems? Or is it in fact a mistake not to acknowledge that there has been a cover-up of much more serious problems?

### The Siege

"We start with an image — a tiny, golden child on hands and knees, circling round and round a spot of the floor . . ." So begins this chronicle of Jessy, written by her mother. It is the story of the author's attempt to penetrate the fortress that is her autistic daughter: thus the book's title.

Jessy ("Elly") was born in 1958, long before there were evaluation and diagnostic criteria for autism. Indeed, much of the body of knowledge on autism has been developed in the last five years. For the reader unacquainted with autism, it is important to keep in mind that the medical community has evolved far beyond what Jessy and her family experienced. For those of us with newly diagnosed, young children, we give thanks that our children were at least born in a more enlightened time.

**The Siege** is not easy reading; the prose is perfectly correct but often overly stylized, almost poetic. But the detailed examples of her daughter's behaviors and speech, her progress, her tiny victories, provide an understanding of the autistic mind and soul that cannot be captured in an academic cataloging of symptoms.

My own son, Reece, is autistic. There are striking similarities between these two special human beings of very different capabilities. As I read, amazed at the similarities (to the point of using the same expressions — "never ever again!"), I came to realize that they were both cut from the same imperfect



•  
*The autistic continuum*

The findings from research and clinical work are best explained on the hypothesis of a continuum of impairments of the development of social interaction, communication and imagination and consequent rigid, repetitive behaviour. To quote Kanner (1973): "It is well known in medicine that any illness may appear in different degrees of severity, all the way from the so-called *formes frustes* to the most fulminant manifestations. Does this possibly apply also to early infantile autism?"

The continuum ranges from the most profoundly physically and mentally retarded person, who has social impairment as one item among a multitude of problems, to the most able, highly intelligent person with social impairment in its subtlest form as his only disability. It overlaps with learning dis-

abilities . . . and shades into eccentric normality. It is approximately equivalent to "pervasive developmental disorder" as defined in DSM-III-R. . . . Another name for it is the "autistic continuum."

But it is necessary to emphasize that this triad of social impairments, though of primary importance, is not the only variable involved in the clinical pictures. Language, non-verbal communication, reading, writing, calculation, visuo-spatial skills, gross and fine motor co-ordination and all other aspects of psychological and physical function may be intact or may be delayed or abnormal to any degree of severity in socially impaired people. Any combination of skills and disabilities may be found and any level of overall intelligence. The overt clinical picture depends upon the pattern seen in each individual.

piece of cloth — but the part that became Jessy was more damaged than the part that became Reece. The "inattention to simple commands and requests," the "secret smile," the feigned deafness, the garbled sentences. Jessy: "Why is laugh about people crying hurt their feelings?" Reece: "Mom-Mom, I have to take Hawaii on a Papa biplane."

My son, age 4 1/2, is, like Jessy, a gentle child — not wantonly destructive, not aggressive or hostile. For this I am thankful. And yet, he cannot be trusted in the bathtub without supervision, because he dumps his bathwater on the floor. This is Jessy: "She responded to no prohibitions or commands; when she was doing something anti-social it was almost impossible to get her to stop. She simply paid no attention to what we did or said. . . . Why would she go on drenching the floor with bathwater when again and again I asked her not to?"

And the mother's reaction: "I grew more angry than I have ever been with a child — so angry that I cannot recall it without shame. . . . Everything was different after she came home from the hospital [time of diagnosis]."

Autism is a very difficult disorder to understand, to explain. We parents find ourselves looking for crisp explanations, clarifying examples, as did Ms. Park, when Jessy learned about left and right: "I was tempted to elevate it into a definition: an autistic child is one who finds

the concepts 'left' and 'right' more easily available than 'good' and 'bad.' . . ."

When a child is diagnosed as handicapped, a parent's primary worry is, "What will happen to my child when I am gone?" The last chapter — an epilogue describing Jessy at age 23 — details the richness of Jessy's life as an adult, and the very long journey she has made. Ms. Park describes Jessy at the bank, waiting impatiently for her turn at the window: "[The bank tellers] know that she is different. A person is different when it is less difficult for her to balance her checkbook than to wait patiently for her turn."

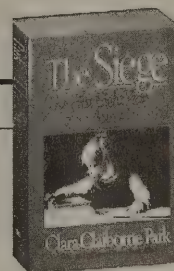
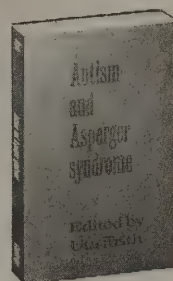
Ms. Park writes: "For Elly [Jessy], for whom each interaction must be learned separately and again and again, the important subject is Deportment. To speak in greeting, face up, voice audible, while standing neither so close as to embarrass nor so far that the greeting goes unnoticed — to share attention — to respond to an overture — to take part in a game — to listen with patience . . . these are Elly's lessons." I understand. And it is comforting to know that someone else understands. —Cheryl S. Scott

• A normal child develops almost automatically. It needs no officious overseers to assist it in the use of its senses. It is sufficient that it find itself in a world that can be touched, heard, seen. If babies had to be taught to reach, to focus, to listen, to interpret, the human race would never have

## Autism and Asperger Syndrome

Uta Frith, Editor. 1992; 257 pp.  
ISBN 0-521-38608-X

**\$17.95** (\$19.95 postpaid) from Cambridge University Press, 110 Midland Avenue, Port Chester, NY 10573; outside NY: 800/872-7423, NY only: 800/227-0247



## The Siege

(The First Eight Years of an Autistic Child)  
Clara Claiborne Park, 1967, 1982;  
330 pp. ISBN 0-316-69069-4

**\$12.95** (\$15.45 postpaid) from Little, Brown & Co./Order Dept., 200 West Street, Waltham, MA 02154; 800/343-9204

survived. The most gifted pedagogue could hardly hope to program the speech development that takes place spontaneously in a dull normal two-year-old.

But Elly was not a normal child. She was not spastic or paralytic, yet we could not take for granted that she would use her body. It was the same with the more abstract abilities — with hearing and with sight. We could not take them for granted either. Elly was not blind, but sight is more than images on the retina. The organism must record, but it must also interpret before it can be said to see. As eighteen-month-old Elly flipped the pages of her colored picture books, what did she see? Did her mind integrate the reds and browns and blacks and blues and greys into a kitten or a car? I could not say. I could only observe that she flipped the pages rapidly, steadily, with never a pause. Once — once only — she had shown she recognized a picture, of a blue teddy bear like her own. That was at seventeen months. Months passed, one year, another, and never did Elly give another sign that she could see a picture.



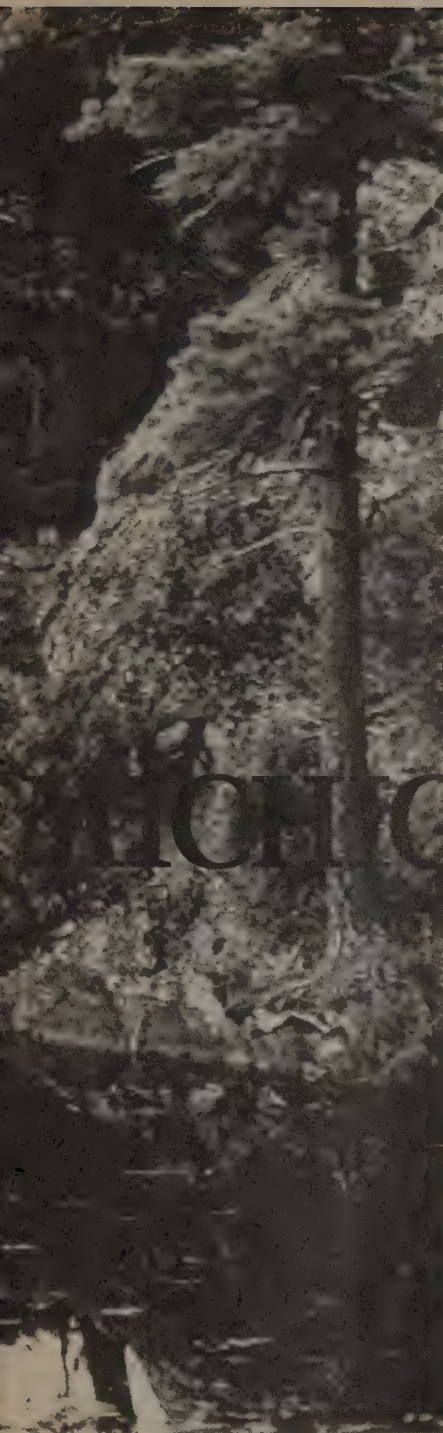
## Dispatch from a Yooper Wilderness Agent BY STEPHANIE MILLS

Everybody in Michigan knows that there isn't even a half-acre left of the state that hasn't been 1) logged off, then 2) planted to alfalfa, then 3) graded and turned into a convenience store's foundation. At least, this used to be common knowledge.

But I guess we missed some virgin forest — though it's in a corner of the Upper Peninsula (UP: therefore Yoop; denizens thereof: Yoopers) that wouldn't support a convenience store for long anyway. Michigan forests being what they are, wear Cutter's and rubber footgear while reading this brief travelogue. —Richard Nilsen

**L**NLATEWINTER of '92 – '93, when the snow finally came to test the boughs of the scotch-pine monoculture 'round my house, I was cozy, mooning over a wonderful old tree book, Henry H. Gibson's *American Forest Trees*, which was published in 1913. In

graceful unassuming prose portraits of more than one hundred North American tree species, Gibson described their habit, their magnitude, the qualities and uses of their woods, their ranges, and their virtues. The average heights and girths of various species he cites



there were forests east of the Mississippi as fantastic as the faraway tropical rainforests appear to us now.

The most arresting feature of *American Forest Trees* is its photographs of good-sized specimens of each tree, usually with a person posed in front of the trunk, or to the side, to indicate scale. These humans-for-scale are often lumbermen. In a few cases the camera catches them in the act of felling. Most of the trees they are toppling are two to three times a man's girth and possibly twenty times his height. Thus Gibson's sylvia is also an album of ancestral trees and their executioners.

the settlers' reaction was to girdle and burn and open up clearings.

From E. Lucy Braun's unromantic but highly serviceable *Deciduous Forests of Eastern North America*, I got a sense of the forest's character in my bioregion, this hemlock-white pine-northern hardwoods realm. It's an edgy, handsome association of broadleaf and conifers with white pine towering fifty feet above the canopy of maple, beech, *tilia*, and hornbeam; with hemlocks patiently abiding the gloom, growing in clusters or solitarily, needing the deep shade for decades.

Literature, even tree literature, is no substitute for a walk in the woods. But the possibilities for roaming at large in realms of virgin Great Lakes forest are dwindling as fast as society's appetite for pulp and timber increases.

A couple of Midwestern magnates of an earlier era donated extensive Upper Michigan wildlands to the federal government to preserve. One of these areas, Sylvania, is known and heavily used; the McCormick Wilderness considerably less. They contained all the Lakes State's old growth I'd ever heard of, and my intention to head north to visit these public forests remained vague, in the future sometime.

In May of 1992, happenstance brought sometime into focus and disclosed some forest more primeval. Following a talk I gave, up in Marquette, a couple of back-country rangers — ecologist Doug Cornett and photographer Dan Wells — came up to tell me about virgin forest remnants they were discovering in an area to the northwest, called the Michigamme Highlands. They spoke of ancient groves of white pine, white cedars pushing the half-millennium mark, sugar maples several centuries old, all tucked away in the jumbled nubbins of one of Earth's oldest mountain ranges. These relicts stand in areas

I got my taste for reading about our trees from the grand elegies of Richard Lillard (*The Great American Forest*), Donald Culross Peattie (*A Natural History of Trees of Eastern and Central North America*), Eric Sloane (*A Reverence for Wood*), and Rutherford Platt (*The Great Forest*). These authors variously describe the awful European encounter with North American woodlands. They detail the immensity of the old trees, the weird affect of the forest, the hundreds of particular uses to which different woods were put by colonists and settlers. From their books I came to love the myth of the virgin forest and the historic truth of trees that stood and grew year after year for hundreds of years, looming so large and forbidding, finally, that

would dwarf the third- and fourth-growth examples we're accustomed to these days. The conditions that allowed such growth — extensive hemlock groves, oaks many centuries old, beech trees with ninety-foot boles — will not soon come again. Yet just a lifetime ago

too rugged to log profitably — yet — occupying land currently for sale, or in the possession of paper companies.

Doug and Dan and their fellow activists, Kraig Klungness and Catherine Andrews, were beginning to shape a campaign to preserve these ancient forest tracts and weave them, along with other relatively undisturbed state and federal lands, into a fabric of Big Wilderness, a grand reserve in the Upper Peninsula. I expressed a willingness to help and a very keen interest in seeing these incredible places. So a field trip was arranged for August.

My idea of virgin forest had had mostly to do with the stupendousness of the trees. It turns out that the virginal quality lies not in grandeur, but in refraction. The highlands harboring these remnants are nowhere level, but a tumult of defiles, slopes, faces, wetlands, groves and pockets. It makes an uncommonly rich array of habitats, where every half-acre is a world of its own.

A raven croaked greetings (or possibly "Beat it!") as we approached the rock cleft up which our party made its entry into the highlands, and its revelation of ecological integrity.

We hiked through dim, pure stands of old hemlock, past exquisite little iris bogs caught in depressions in the broken terrain, past sphagnum openings with palisades of white cedars, up to a promontory looking out over lakes with rocky spruce-clad islands. In the canopy were occasional crimson sprays of sugar maple already sporting fall color. There were waterfalls and seeps, hewn basalt faces washed with moss, Indian pipe standing scarce and nacreous. No one yet has identified all the trees,

shrubs, grasses, sedges, forbs, fungi, mosses and lichens we were enmeshed with; indeed such cataloging may be beyond possibility. An abundance of wildflowers lay underfoot: pipsissewa, snowberry, bunchberry, rattlesnake plantain, *habernaria orbiculata*. We gobbled dewberries, blueberries, and huckleberries. Although we were hurrying — trying to see as much of the territory as possible during the long hours of summer daylight — in the moments when we paused, everywhere the eye alighted was a new constellation of living forms.

Even within species there was stunning variety. Trees of all ages were present, from yearling white-pine feathers to soaring monarchs three armspans around; from elfin sugar maples fluttering their jaunty leaves to craggy old geezers whose trunks ascended out of view. There was a procession of generations, not orderly, but complete. Elsewhere in this region, where the topography is more forgiving, logging and pulpcutting have opened edges and acres of browse. White-tailed deer have irrupted and pressed hungrily into deeper woods, eating away the cedar and hemlock seedlings and tender plants of the forest floor. Where we were, only rogue bucks could survive the winters. And a misstep into the shoulder-deep snow could render them prey to the timber wolf and cougar whose presence is hinted.

Beautiful as the place was, its extraordinariness did not register until after we'd departed, driving through endless pulp plantations of jack and red pine and high-tech larch. At some fundamental level, I had recognized the virgin forest. Its wholeness was somehow familiar and the organism that I am felt quite at home.

Book knowledge of the Big Cut, the turn-of-the-century lumber rampage, had left me with the impression that Michigan's ancient forest was gone. Ground truth is that as recently as the 1940s, one-fourth of the Upper Peninsula landscape was intact. The extractive economy has been fragmenting this portion ever since, in consequence of logging, mining, pulp production, small-town sprawl and vacation-home development. The pace of extraction has accelerated wildly in the last decade, threatening to isolate, if not eliminate, all that remains of virgin and old-growth forest.

The word fragment may cause you to think, "What's the use? Why struggle to save the scraps?" I beg you to think again. The fragment I saw was like Ali Baba's cave, filled with jewels. It was big enough to contain a perfect day, and a vision of the once and future Great Lakes Forest.

No reason we can't dream forward into a time where such forests will reclaim their former ranges — if we act now to secure them, their surroundings, and the pathways they need to pass along their lore. True forests won't issue from labs. They are latent in refugia like the Michigamme Highlands, fragments and scraps of virgin forest that still possess their full complexity; where big old trees own the genetic memory of how this kind of thing — not maximum wood-fiber production, but a grace for withstanding hundreds of winters — is done. ☘

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If you wish to help preserve the Michigamme Highlands and reinstate the Great Lakes Forest, contact: Northwoods Wilderness Recovery, Inc. • P. O. Box 107 • Houghton, MI 49931-0107 • (906) 482-4364.



## Her Blood Is Gold

Women are supposed to feel different just before and during their periods. What a concept! There is even spiritual and mythological precedent for feeling spacey, introspective and emotionally tender at that time of the month. Lara Owen encourages us all, men and women, to acknowledge the monthly flow of blood as a spiritual, emotional and valuable bodily function. As one who became a feminist at an early age, I've spent most of my menstrual years subscribing to the notion that periods don't make women any different than men. In addition, our culture as a whole discounts earthy, cyclical, messy events. Consequently, we often pretend monthly bleeding isn't happening to us or those around us. Lara Owen suggests that much of the discomfort felt by many women during the premenstrual time is due to ignoring the internal changes, as well as stifling the urge to lie down, sleep, withdraw, or whatever. I highly recommend this book for Lara Owen's ability to help us look with fresh eyes at a common feature of our lives.  
—Celia Cuomo

• The technology of suppression — tampons, vaginal deodorants, sophisticated pain-killing and mood-altering drugs — has acted together with the myth of the superwoman to create a predominant cultural attitude that a menstruating woman is no different from one who is not bleeding. The trouble with all this is that it simply isn't true. Any woman remotely in touch with her body knows that when she is menstruating, and usually for a few days before, she feels different. And this is a fact of nature that ultimately cannot be denied.

• The altered state that menstruation can take one into is not compatible with late twentieth-century action-packed industrial life, with running around in the world performing our scheduled and organized tasks. Menstruation is predictably unpredictable. You never know exactly when it is going to come, and sometimes it completely surprises you. Not only is it inconsiderate of timetables and schedules, it is also messy. Hooray! We try to sanitize and order modern life to the degree that we run into danger of there being no life left in us. Periods save us from this doom — they are a wild and basic, raw and instinctual, bloody and eternal aspect of the female — and no amount of "civilization" will change that.

• Anthropological literature abounds with tales of menstrual taboos based on fear and terror of the polluting and dangerous na-

ture of the menstruating woman. When the bodily processes of women and the innate power of menstruation are denied and suppressed, what could be a highly creative energy gets twisted into something "evil." The many taboos about menstruating women show a recognition of power — but usually with a negative interpretation. If a menstruating woman can, as the Talmud warns, cause the death of a man by her mere presence, or, as Pliny tells us, by her touch "blast the fruits of the field, sour wine, cloud mirrors, rust iron, and blunt the edges of knives," then there can be little doubt that something pretty powerful is going on.

• Symptoms arise to wake us up. They make us put our attention on the part of the body where they occur. We can't escape our wombs if they are making pain, and we can't ignore the menstrual cycle if it makes us behave differently for a week every month. This is part, if not the whole, of the

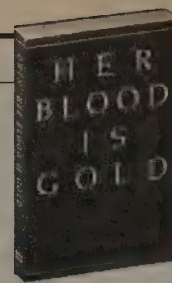
### Her Blood Is Gold

(Celebrating the Power of Menstruation)

Lara Owen, 1993; 187 pp.  
ISBN 0-06-250641-2

**\$13** (\$15.75 postpaid) from HarperCollins Publishers/Direct Mail, P. O. Box 588, Dunmore, PA 18512; 800/331-3761

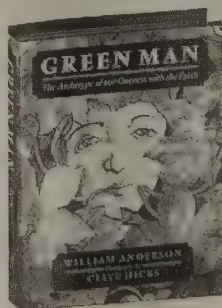
meaning of symptoms. And it is important to remember that they are *symptoms* — that is, the surface manifestation of a deeper disturbance. They are messages from the body.



## Green Man

The Green Man — a creature with the dual nature of man and leaf — is an archetypal symbol that arises from the depths of the psyche. It is especially linked with the Christian origins of modern science. Together with "Mother Earth," this vital symbol has lived on in folklore and religious art from prehistory through cycles of degradation and suppression — and like the seasonal waxing and waning of plant life, the Green Man has emerged triumphantly into new expression in each successive era. This scholarly, beautiful book describes his journey in image and story.

—Nola Lewis



### Green Man

(The Archetype of Our Oneness with the Earth)

William Anderson and Clive Hicks.  
HarperSanFrancisco, 1990; 176 pp.  
ISBN 0-06-250075-9

**\$16** (\$18.75 postpaid) from HarperCollins Publishers/Direct Mail, P. O. Box 588, Dunmore, PA 18512; 800/331-3761



The Green Man of Bamberg Cathedral, Germany, c. 1239.

• By the end of the eleventh century they were increasingly finding the skills to introduce more and more figures into their capitals, frequently telling stories or making moral points in images that were surrounded by vegetation. Beast heads sprout vegetation or spring out of leaves as though they were surprising fruits. . . .

The Green Man is only one of tens and hundreds of images competing for the attention of Romanesque sculptors. Licensed to portray sin in all its forms, symbolically through the struggles of wild and mythical beasts and through the devouring of man by the beast in him, the sculptors attacked the stone with gusto. The influential scholar Hrabanus Maurus (784-856) had identified the leaf with sin, especially with sexual sin, and this probably gave a further licence to the portrayal of vegetation.

## Spirit and Nature

A fall 1990 Middlebury College interfaith symposium on the environment brought together concerned Buddhist, Christian, Islamic, Jewish, and Native American leaders. Professors John Elder and Steven Rockefeller have edited their addresses for this book.

The essays tend to strike a conciliatory chord — a recognition of the need for a unity of spiritual resolve in the face of a crisis of undeniably global proportions. Sparks do fly occasionally; Jewish theologian Ismar Schorsch and Islamic scholar Seyyed Hossein Nasr spend a lot of time quoting scripture and defending their traditions from charges of negligence in environmental matters. The less dogmatic offerings hold more resonance.

All of the authors of these essays clearly share a basic love of nature and an appreciation of its grandeur and supremacy. In linking the environmental crisis with a crisis of spirit, this book affirms that the fate of the Earth depends upon the full engagement of our hearts, as well as our minds. —Eric Morlock

I believe that every individual living being, whether animal or human, has an innate sense of self. Stemming from that innate sense of self, there is an innate desire to enjoy happiness and overcome suffering. And this is something which is innate to all beings. I believe it is a natural phenomenon. . . .

Therefore, we can say that the purpose of life is happiness, joy, and satisfaction, because life itself, I think, exists on the ground of hope, on the basis of hope. And hope is, of course, for the better, for the happier. That is quite natural, isn't it? In that case, relations with one's fellow human beings — and also, animals, including insects (even those which sometimes seem quite troublesome) — should be based on the awareness that all of them seek happiness, and none of them want suffering. All have a right to happiness, a right to freedom from suffering.

—His Holiness the 14th Dalai Lama

If there is a common cause of global warming, overpopulation, unsustainable economic growth, loss of biodiversity, depletion of natural resources, and the needless suffering of humans and other animals, it is the failure of "we the people," North, South, East, and West, to take moral responsibility for our world. The only possible locus of accountability, and therefore the only proper subject of moral initiative, praise, and blame, is what we do or fail to do as communities of people, our

practice of individual and collective self-government. It is easy to lose sight of this obvious and basic fact.

It follows that the ecological crisis is a crisis of citizenship. By definition, a citizen is a member of a community of persons who considers him- or herself morally accountable to the community as a whole. How we think of the meaning of citizenship, its grounds, its bounds, its practices, its purposes, has everything to do with the ecological crisis. "Create citizens, and you will have everything you need," said Rousseau. We also tend to lose sight of this basic fact.

Virtually every reason that we can give for our failure to live well on the earth has its source in some aspect of our consciousness of ourselves as citizens.

—Unitarian Minister J. Ronald Engel

## Spirit and Nature

(Why the Environment is a Religious Issue)

Steven C. Rockefeller and John C. Elder, Editors. 1992; 226 pp. ISBN 0-8070-7709-7

**\$16** (\$18.75 postpaid) from Beacon Press, 25 Beacon Street, Boston, MA 02108; 617/742-2110



## Sacred Eyes

In the fourteen years of research that went into this book, L. Robert Keck became fascinated with the fact that virtually every science, every field of endeavor, every public institution, and every historian and cultural analyst was saying that the latter part of the twentieth century was a transformational time. If one looked deeply enough, could we find a common force that is feeding all the various revolutions and informing the various perceptions of transformation? His answer is yes — but only if one learned to see "with sacred eyes."

Keck is a theologian and philosopher of health, but these degrees alone did not prepare him to create this new synthesis of physical, mental, and spiritual evolution of the human story. Rather it emerges from his own personal evolution, one that took him from a youth filled with athletics and the joy of a superb physical body, through a mystical experience that led him into a career as a Christian minister, and finally into the cauldron of a "hopeless" illness that left him confined to a wheelchair in excruciating pain. The medical hopelessness of his condition and the remembrance of his youth fused to lead Keck on a quest for self-healing that successfully brought

him back into the thick of life — but seeing it anew.

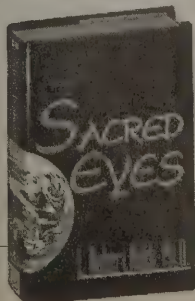
**Sacred Eyes** divides human history into three epochs: Epoch I began 150,000 years ago and had a feminine value system emphasizing nurturance, cooperation and unity with nature. Epoch II, which began 10,000 years ago, is humanity's "adolescence": a time when ego and mental development were our evolutionary purpose, and mind and body separated. As we move into Epoch III, five major values are emerging to shape the content of our lives: 1) holism and synergy; 2) empowerment; 3) change; 4) remembering human nature; and 5) historical integrity. Each of our major institutions must be transformed to embody these values. —Nola Lewis

Everything is sacred if we but look into its soul — the entire universal context, the long evolutionary journey of humanity, these incredible times at the end of the 20th century, and our own personal stories. With sacred eyes we can see the beauty, the divinity, and the meaning and purpose in this collective journey, as well as our own reason for being. With sacred eyes we can see the larger context without overlooking the details of the moment. With sacred eyes we can see the reasons for tough optimism and pragmatic hope within the chaos of our times.

## Sacred Eyes

L. Robert Keck, 1992; 297 pp. ISBN 0-941705-23-4

**\$18.95** (\$22.95 postpaid) from Knowledge Systems Inc., 7777 W. Morris Street, Indianapolis, IN 46231; 800/999-8517



# The Shape Of The Universe





**I**F YOU ARE FORTUNATE ENOUGH to share a neighborhood with a leafy elm, a gnarly oak, a soaring redwood, take another look at its silhouette against the sky. That self-similar 4-D explosion of branching branches is a clue to a cosmic riddle or two, and a key concept in fields as unrelated as vascular surgery and software design.

The Buddha knew this, and so do neurologists, database programmers, and mythologists.

*Axis mundi*, the axis of the world, is the tree at the center of everything sacred. Mythologist Joseph Campbell, referring to the Buddha's awakening, noted that: "This is the most important single moment in Oriental mythology, a counterpart of the Crucifixion of the West. The Buddha beneath the Tree of Enlightenment (the Bo tree) and Christ on Holy Rood (the tree of redemption) are analogous figures, incorporating an archetypal World Savior, World Tree motif, which is of immemorial antiquity."

To Hindu dream adepts, the question of how you know that you are awake is at once psychological and metaphysical. David Shulman, in *Tamil Temple Myths*, discusses a character in a myth who realizes that he is dreaming the tragedy of his life, and notes: "The nature of his delusion is clear from the moment he first catches sight of the upside-down tree — a classic Indian symbol for the reality that underlies and is hidden by life in the world, with its false goals and misleading perceptions."

To say nothing of the Garden of Eden and its two special trees. Why do trees always happen to be on the set when God talks? It doesn't matter whether your cosmology is Hebrew, Christian, Hindu, Buddhist, Pagan, Shamanist or Animist: trees are always part of the scenery when a theophany happens.

Tradition has it that the Buddha's tree was the type known as "pipal" (*ficus religiosa*), and that it was precisely as old as the fellow who sat down in its shade to catch a case of satori. Sakyamuni, as the Buddha was known pre-enlightenment, had a lifelong habit of sitting under pipal trees that were exactly his age. It was also written that the Buddha's mother (a.k.a. *Maya Devi*) held onto the branches of a pipal while she gave birth to him.

Why a tree? Why not a seashell, a lightningbolt, an old man with a beard? The iconography is not strictly Asian: Yggdrasil, the world-Ash, is Norse. The Druids were far from India and China. The theme surfaces in folktales, holy books, cave paintings, tiled mosques, and frescoed chapels on every part of the globe. The

Chinese saw it as a giant peach tree that bore the fruit of immortality. In the nineteenth century, German scholars discovered that the word temple derives from the Indo-European roots meaning "sacred grove."

**T**HE VISUAL representation of a tree that branches at both ends is a model of the universe as a living organism, a metaphorical map that serves equally well for the cosmos external to the individual and the spectrum of consciousness deep within — with its highest branches in the heavens and its roots deep within the dark underrealm.

Are we also drawn to trees because our minds know that our brain structures are tree-shaped? Do these signatures of our internal informational systems keep emerging in symbols of our deepest religious impulses because they are what nineteenth-century anthropologist Adolf Bastian called *Elementargedanken* — "elementary ideas" that are hardwired into our brains? Our nervous systems are shaped like trees, and so are rivers, capillaries, data structures, probability worlds, solution spaces, chess games, and chain reactions. Our ancestors lived in trees, not too long ago. It's no wonder that Sakyamuni sat under one when he was ready to awaken.

Trees are talismans of sanity and wholeness to Western psychotherapists as well as to Eastern

Opposite: 1) The full-page picture is a 1924 aerial-photograph patchwork image of the Rajang Delta of Borneo. 2) Upper left: a sprig of *Thuja orientalis* ("Sieboldii") at about seven-eighths scale. 3) Inset, upper right: dendrites (crystallized manganese oxide) in shale — about three-and-a-half times actual size. 4) Inset, center: another arboreal distribution system — a human lung.

1) *The World From Above*. 2) *Manual of Cultivated Conifers*. 3) *Nature Close Up*. 4) *The Search for Solutions*.

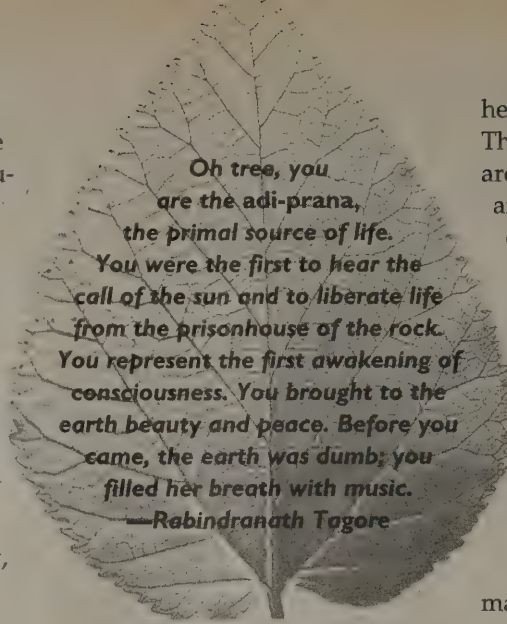
*Before I was drawn into the Whole Earth vortex, I published a little newsletter called Brainstorms, in which a shorter version of this devotional piece first appeared. A version longer than this one was published in a collection, Excursions to the Far Side of the Mind, now out of print. If you feel like reproducing this piece in any medium, you have the author's and editor's permission to do so. —HLR*

mystics. According to Jungian psychoanalysts, the appearance of a tree in a dream can be fortuitous, in the sense that it often symbolizes, empowers, and heralds a movement toward wholeness of the personality. Marie-Louise von Franz notes that "Since . . . psychic growth cannot be brought about by a conscious effort of will power, but happens involuntarily and naturally, it is in dreams frequently symbolized by the tree, whose slow, powerful, involuntary growth fulfills a definite pattern."

One characteristic that doesn't vary much from one tree to another is the way components of the tree — the larger and smaller branches and twigs — reflect the shape of the entire tree; a computer programmer would recognize the tree as a "recursive structure" (because the same pattern "recurs" at both the top and bottom levels of organization). As the European alchemists of the Middle Ages would say: "As above, so below."

This shape that makes trees and other things look treelike brings a new perspective to several important questions about the way things work: How can you keep track of a billion units of anything and make sure you can find each unit as quickly as possible? How do you move things from one point to many other points most efficiently? A recursive, branching tree shape is the visual analog of the answer to both questions.

A tree of the botanical variety is shaped that way because a branching plant efficiently collects moisture from the earth via ten thousand roots and distributes it rapidly to ten thousand leaves. (Kabbalism, the Jewish mystical tradition, depicts the path to God-consciousness as a tree-shape with the explanation that this is the way to distribute



God-consciousness to innumerable sentient beings.)

Examine an aerial photograph of a river delta next to an X-ray arteriogram of a human lung and you'll see that branches aren't limited to forests. Rivers branch as they run into their own sedimentary deposits; when the main channel suddenly becomes shallow, an arboreal shape most efficiently distributes the river's flow. Pulmonary arteries branch because branching enables the lungs to distribute oxygen to the blood rapidly. The branching of nerves and blood vessels in the brain is known as "arborization."

Quantum physicists even dreamed up four-dimensional trees. Because of certain aspects of the equations describing the transformations of electromagnetic energy, it is possible to hypothesize that the universe is an infinitely branching entity. This formally permissible (if unconfirmed) logical consequence of the quantum equations is known as "the many-worlds interpretation." Your lifeline (your life as expressed — time, motion, endeavor — as a sort of vector) and mine, called "worldlines" by quantum physicists, branch when we make decisions, take action,

hesitate, move, or stand still. There are worlds in which you are the Buddha and worlds that are exactly the same as this one, except you part your hair on the opposite side. The abstract space of such a universe, filled with infinities of non-intersecting branch universes, is a four-dimensional tree that grows at a rate incomprehensible to 3-D mindsets.

A tree can be a map of space or time or psyche, or it can be a map of information. Tree-shaped data structures are essential parts of all computer software systems because trees offer an effective and orderly way to store and retrieve large amounts of binary information. A tree in which each branchpoint leads to exactly two branches is the direct visual analog of a binary code, because you can get from the trunk to any one of the leaves by making either one of two decisions at each branchpoint.

To programmers who are trying to write software to emulate human problem-solving, tree-shaped strategies are "a way to fan out quickly into a solution space." The first computer chess programs tried the "brute force" method of evaluating the consequences of every possible move at every step of the game, but the most powerful computers, then and now, bog down in the explosion of possibilities that happens if you try to look down too many branches in a recursively branching structure. It was Claude Shannon, the father of information theory, who demonstrated that the explosively branching tree of possibilities is destined to destroy any brute-force approach after only a few steps. Among artificial-intelligence programmers, the creation of increasingly effective search-tree-pruning algorithms has become a grail.

Kids know about trees, and the easiest way to remember what the world was like when you were a kid is to climb a tree. Kids climb them, lie down under them and look up at the dappled sunlight, hang swings from them, build houses in them, paint pictures of them, collect their leaves. Today's kids know that trees are disappearing because of human activity, and they know that trees are the lungs of the biosphere. Which means that the act of planting a tree with a child has taken on ecological, as well as psychological and spiritual, significance. Years ago, I discovered a Bantu word that can teach us something valuable: *mahamba*.

A mahamba is a "spirit-tree" that is planted when a child is born. Can we make tree-planting both a part of family life and a sacred act again? We could start with a new meme — an idea deliberately designed to be infectious.

As soon as possible after birth, take the child and its parents to plant a mahamba. Make sure that the tree is native to the local environment and that it will be



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accessible in the future. It might not be easy to find a proper place to plant and to obtain an appropriate seedling; overcoming these obstacles is the spiritual offering of the child's sponsor. As soon as the child is able to walk, bring him or her out to meet the tree and to feed it. Encourage the child to take over the care and feeding, and seal the responsibilities with gifts. Continue reinforcing the

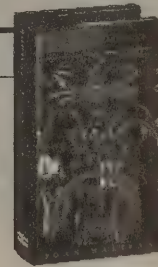
merit to be gained from the act, in whatever terms the child understands: the legend of a tree that brings good fortune might be one of those harmless myths that can teach more than a hundred hard facts. And the simple act of nurturing a tree, distributed memetically, repeated recursively, might help our species get a grip on our planet's runaway throttle. 🌱

## The Fruitful Darkness

*Mountains may be defined as anchors of landscape and spirit. One can walk around the physical mountain, but the spiritual mountain encountered by anthropologist, teacher and adventurer Joan Halifax peels away the civilized layer and exposes the human soul as essence of nature.*

*She fell in love with a friend's Macintosh; this is her first book "breathed into reality" on a computer. She hauled a solar charger with her into the high desert and wrote from her deepest center. Perched on a rock ledge, she points out the trails in the landscape of the spirit, the ways to the central connection point of all existence. The center of the mandala, the place of practice, is ringed with halos of other practices, of other cultures. Her hunger for communication with rocks and ravens, sensing the wolves in the wind, walking away from the cushion of Western lifestyle, is hunger to find the center of nourishment of our own mysterious, interconnected being.*

*Halifax reveals her pilgrimage along the sacred paths of the Himalayas, bearing the ashes of Sherpa climber Tenzing Norgay and the grief of her mother's sudden death. She speaks to the wind and snow, endures the heat and fasts among the pilgrims of Tibet. Seeking the limitations of embodiment, peering over the cliffs into glacial runoff bearing the milky green dust of ancient mountains ground to powder, Halifax looks directly into past, present and future Nature, she of it and it of us, human, stone, wind, water, all of the earth and in our earthly way, forever. This is our universe, home, relative and ancestor. She tells us how we have underestimated our identity, how the roots of all living things are tied together in the darkness. The way of interconnectedness shows all phenom-*



### The Fruitful Darkness

(Reconnecting with the Body of the Earth)

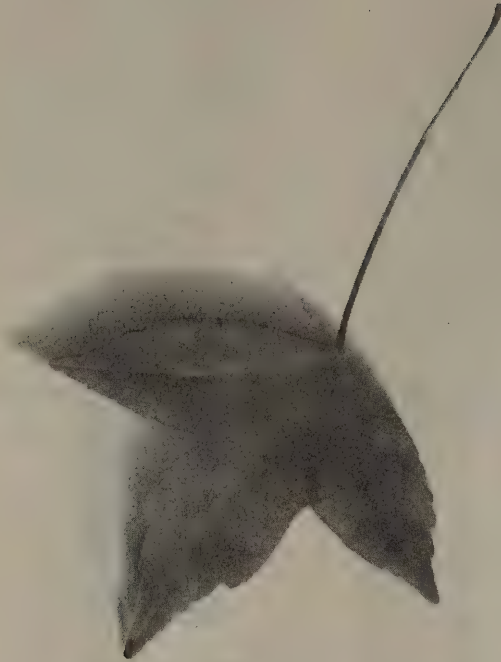
Joan Halifax. HarperSanFrancisco, 1993; 240 pp. ISBN 0-06-250369-3

**\$18** (\$20.75 postpaid) from HarperCollins Publishers/Direct Mail, P. O. Box 588, Dunmore, PA 18512; 800/331-3761

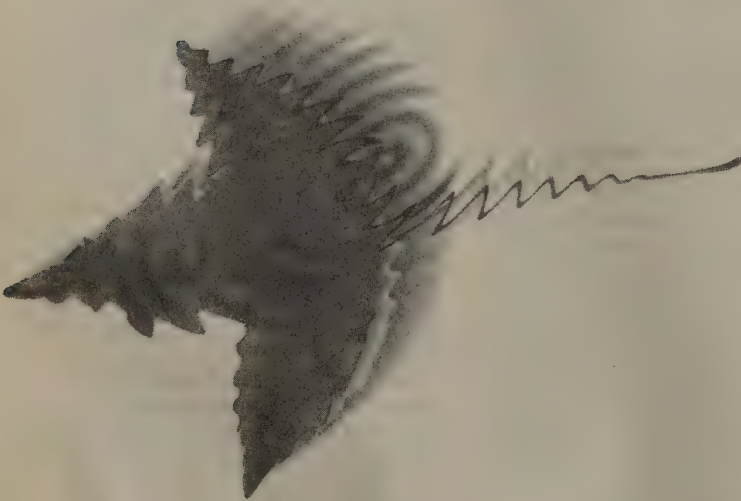
*end to be an extension of self, a self without boundaries. —Carolyn Garcia*

Mountains have long been a geography for pilgrimage, places where peoples have been humbled and strengthened. They are symbols of the Sacred Center. Many have traveled to them in order to find the concentrated energy of Earth and to realize the strength of unimpeded space. Viewing a mountain at a distance or walking around its body, we can see its shape, know its profile, survey its surrounds. The closer you come to the mountain, the more it disappears. The mountain begins to lose its shape as you near it. Its body begins to spread out over the landscape, losing itself to itself. On climbing the mountain, the mountain continues to vanish. It vanishes in the detail of each step. Its crown is buried in space. Its body is buried in the breath.

On reaching the mountain's summit, we can ask, What has been attained? The top of the mountain? Big view? But the mountain has already disappeared. Going down the mountain, we can ask, What has been attained? Going down the mountain? The closer we are to the mountain, the more the mountain disappears. The closer we are to the mountain, the more the mountain is realized.



## LAKE AND MAPLE LAKE AND MAPLE



I want to give myself  
utterly  
as this maple  
that burned and burned  
for three days without stinting  
and then in two more  
dropped off every leaf;  
as this lake that,  
no matter what comes  
to its green-blue depths,  
both takes and returns it.  
In the still heart,  
that refuses nothing,  
the world is twice-born —  
two earths wheeling,  
two heavens,  
two egret reaching  
down into subtraction;  
even the fish  
for an instant doubled,  
before it is gone.  
I want the fish.  
I want the losing it all  
when it rains and I want  
the returning transparence.  
I want the place  
by the edge-flowers where  
the shallow sand is deceptive,  
where whatever  
steps in must plunge,  
and I want that plunging.  
I want the ones  
who come in secret to drink  
only in early darkness,  
and I want the ones  
who are swallowed.  
I want the way  
this water sees without eyes,  
hears without ears,  
shivers without will or fear  
at the gentlest touch.  
I want the way it  
accepts the cold moonlight  
and lets it pass,  
the way it lets all of it pass  
without judgment or comment.  
There is a lake, Lalla Ded sang,  
no larger than one seed of mustard,  
that all things return to.  
O heart, if you  
will not, cannot, give me the lake,  
then give me the song.

by Jane Hirshfield

Easy to see  
that the lion and angel  
are one visitation,  
but how do you come  
to offer your throat to either?  
In autumn, the trees  
learn to drop off  
both their disguises,  
what finally fills them is simple.  
The heart's deepest  
affections will equally be devoured.  
And still we go ankle deep  
into that carnage, lifting first one,  
then another part up to the light.  
As if we were looking for something simple.  
As if what we wanted  
were not the thing that falls.

## Lion and Angel

# Dividing the Maple Between Them

*We rarely run  
poetry. But Jane Hirshfield's  
work is stunning, and her poet's sensibility  
adds something essential to the spiritual,  
ecological, and political discussions of trees  
that seem to have converged in these pages.*

*Katy Butler reviewed Ink-Dark Moon, Hirshfield's co-translation of love poetry by women of the ancient court of Japan, in WER#59. Hirshfield's most recent book is Of Gravity and Angels*

*(Wesleyan University Press, 1988). Her third collection of poems,*

*The October Palace, will be*

*published by*

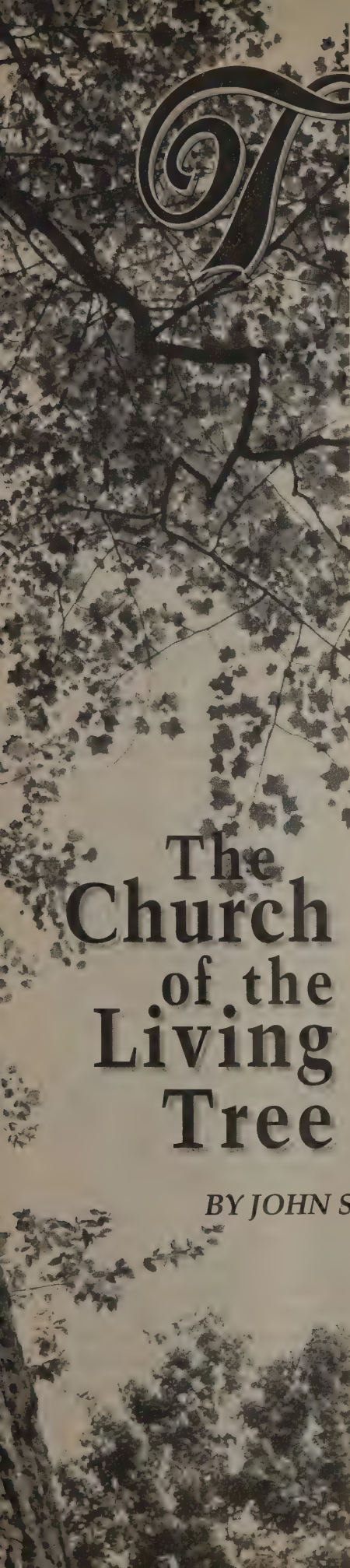
*HarperCollins in early 1994. —HLR*

The editorial department at WER gets about seventeen inches of paper mail a day. I like to pass my eyeballs over as much of that as I can, and I read all the letters addressed to me, but we have to sort and recycle quickly, and we have to be extremely selective about what we keep, lest the incoming mail physically displace us within a few months. Sometimes an item in that river of paper catches my eye and I know I don't want to ditch it, but I'm not sure what to do with it. A small pamphlet about the Church of the Living Tree sat on my desk for more than a year, through three guest editors and who knows how many reams of clippings and letters and manuscripts and folders. Every once in a while I'd pick it up, and it still made sense, and I still didn't know what to do with it.

When Stephanie Mills sent in an article about ancient forests ("Michigamme," p. 32), and Richard Nilsen pulled an article on Christian Pandevotionalism out of the stack of unsolicited manuscripts (p. 52), and Jane Hirshfield submitted several exceptional poems on tree themes (p. 42), I picked up the pamphlet again. With the addition of my favorite old personal paean to treeness (p. 38), the whole collection of material achieved critical mass. The following material is excerpted from the pamphlet.

I like the solicitation coupon at the back of the pamphlet: "Yes, I hear the Trees speaking to me, and I want to respond to them." You can request more information from the Church of the Living Tree, P. O. Box 64, Leggett, CA 95585. —HLR

Trees



**T**

HE CHURCH OF THE LIVING TREE WORSHIPS THE TREE AS the image of God. We understand God as all of life. We do not postulate any role as the Creator of the Universe, nor do we concern ourselves with teleological questions — these matters being considered outside the scope of our knowledge or concern.

It is all Life that we worship as God (specifically, but not necessarily limited to, the entire field of life energy on Earth, including plants and animals as well as all human beings), and choose to represent it in the image of a Tree, not only to express our humility that there is more to God than man, but also to express our reverence for the role that the Tree has played during most of Life's career, and its critical importance right now, and for the future of life.

We regard Trees as primary and indispensable pillars of the life force on this planet, and any regard to the health of that life force must begin with the cultivation of Trees. The loss of the Trees represents the greatest single mistake the human race has made in its entire history. . . .

Trees literally hold the Earth together, their roots extending sometimes hundreds of feet into the Earth's crust, pulling up minerals, nutrients, and water from below, as well as sheltering the ground surface from above, so that animals and smaller plants and even people can develop a habitat supported by Trees. It is not surprising to me that northern California, for example, is beginning to dry up; when the Trees are gone, the Earth can no longer

hold onto the water — the winter rains simply erode the topsoil, and the springs dry up under the heat of the summer sun.

Therefore, the particular goal and purpose of the Church of the Living Tree is to defend and protect the Trees that still remain on

this Earth, to plant more Trees by the millions of acres all over the Earth, and to evolve patterns of human lifestyles that will support Trees rather than exploit and destroy them.

In pursuance of these primary purposes, the Church will undertake additional Tree-support projects such as finding and promoting alternatives to low-grade utilization of forest material — specifically, to promote Tree-free sources of pulp for paper products. Timber companies want you to think they are felling Trees to build houses and fine furniture, but the sad truth is that ever-greater percentages of timber harvests are just being chipped up for the pulp mills so that our mailboxes can be stuffed with junk mail. There are many alternative sources of cellulose for paper pulp: kenaf, hemp, abaca, wheat straw, rice straw, bagasse, tobacco stalks, and seaweed. Some of these materials are available as farming-by-products that are presently burned or otherwise neglected.

While the health of the Trees represents our primary concern, we understand the necessity of modifying human patterns of interaction with the Earth in order to evolve a sustainable lifestyle in which all forms of life can live in harmony. Some evolutionary trends we want to promote include voluntary simplicity leading to a low-impact lifestyle, and local, decentralized political and economic communities that will manage their own affairs: services, schools, health care, social assistance, and environmental consciousness. ☺

# The Church of the Living Tree

BY JOHN STAHL

Before deciding to publish the preceding excerpt from the *Church of the Living Tree*, I called the telephone number listed in the pamphlet to see if they were still doing business.

I found myself talking with John Stahl, the pamphlet's author. He turned out to be a man who acts on his beliefs: a fine letterpress printer, Stahl is also a pioneer in reviving the use of hemp and other alternatives to wood-based papermaking. The catalog for Stahl's *Eva-nescent Press* (P. O. Box 64, Leggett, CA 95585) includes copies of the *Declaration of Independence*, letterpress-printed on handmade 100 percent-hemp paper (\$20), books on *Hermetic philosophy*, *alchemy*, *the Kabbalah* and *the I Ching*, and a variety of handmade papers.

Stahl also sent me a copy of the *New Settler Interview* (\$12.50/12 issues; P. O. Box 702, Mendocino, CA 95460) that included a long interview with the papermaker-printer-philosopher-tree-worshipper. The following article was excerpted from that interview.

If you care about trees, the issue of non-wood paper alternatives is an important one. Stahl is among those who are leading the way back to hemp, the paper source used in America before the timber industry dominated papermaking, and pointing the way forward to other alternative pulp sources. —HLR

# Tree-Free Paper

**T**HOMAS JEFFERSON'S draft of the Declaration of Independence, released by the Continental Congress on July 4, 1776, was written on paper made from hemp.

I've reprinted this document, as relevant today as ever, from the final version; it is on 100-percent-Cannabis hemp paper, prepared from locally grown, anonymously donated hemp fiber, handmade in the traditional manner.

The supply of wood for papermaking is not inexhaustible. As early as 1916, the federal government understood that the trees were running out; Bulletin 404 recommended the cultivation of hemp as an alternative source of fiber for papermaking. The USDA figured out that the supply of trees could barely last a century. Now we're running out of trees. We see the local logging industry fading away because all the easy trees have been taken and there aren't that many left to harvest.

I've been experimenting with alternative fibers. Hemp is definitely one of them, though not the only one. I want to mention one other fiber right away: kenaf.

Kenaf is legal (no psychoactive element) and politically safe, and it is an excellent fiber. It's easy to grow, it's easy to work with, it makes abundant crops, and it makes wonderful paper. A variety of hibiscus — *Hibiscus cannabinum* — kenaf is similar to hemp: a very tough, fibrous plant. It grows like hemp as an annual.

Paper is made from cellulose. Most plant material contains cel-

lulose; however, there's only 30 percent cellulose in wood — at best. The rest is impurities — chiefly lignins and various other junk, which has to be cleaned out through the use of toxic chemicals. And the cellulose is then bleached with chlorine. You go through this incredibly toxic process to extract such a small amount of cellulose from wood. Hemp and kenaf are much richer sources of cellulose.

Most hemp and kenaf paper is made exclusively from bast fiber — the outer part of the stem. However, the inner part of the stem, the woody pithy part called the hurd, is about 70 percent cellulose in hemp. The hurd from hemp — the discards, the poor stuff — is twice the quality of wood.

*Is kenaf as easy to grow as hemp? Does this country have to get accustomed to using a Protestant-ethic plant like kenaf to make paper before hemp is accepted?*

Yes. Hemp is an ideal rotation crop. There's been a lot of contemporary scientific investigation of hemp in Holland and in the Ukraine. In Holland they were searching for a rotation crop for peas and potatoes. Hemp seems to do what's needed; I don't know if it adds nitrogen, or just loosens the soil. I know it suppresses weeds.



## THE NEW SETTLER INTERVIEWS JOHN STAHL

Kenaf is more tropical. For commercial cultivation, you'd want the longer warmer seasons of the southern parts of the country. Hemp you can grow anywhere.

*The agricultural commissioner in Ukiah has no problem with hemp cultivation?*

He thought it was an interesting project and he wished me luck. However, I would have to get an exemption from the state — or the law changed — and likewise at the federal level.

Hemp bast is really strong, and very soft. It's got a feeling of quality; kenaf falls short by comparison. But actually, a hemp/kenaf blend is a better paper than pure hemp. The hemp is *too* strong; it's like a wine that's so rich and fruity that by itself it almost tastes bitter, but when you blend it with some milder wines you get a better product.

*Which variety would you choose to grow if you were growing it for fiber?*

One reason I want a DEA permit to cultivate it is to experiment with that. Quite a lot of work has been done in Holland and France. They're using a variety that has lots of high-quality bast and a low tetrahydrocannabinol [THC] count.

*Exactly the opposite of what is being grown here — and what has contributed to your experiments.*

Exactly. There are many varieties of hemp: the Indian hemp, indica, sativa, and ruderalis — some people are familiar with those three. Apart from those definitions, there are two broad-branch types of growth; one is short, fat,

bushy, branchy, seedy; one is tall, thin, and fibrous. Generally, the tall, thin stuff is lower in THC, and the short, fat stuff has more.

*So you are not trying to pull anybody's leg here: you really are interested in fiber, and you would choose a less psychoactive strain in order to get a better paper.*

The Europeans have been breeding hemp for fiber for a hundred years, and one of their breeding programs is to develop low-THC strains. I'd like to do a breeding program — I'm interested in maximizing the fiber, but I'm also interested in the seed crop.

A number of varieties produce abundant seed crops as well as excellent fiber. If I were to suggest to the Department of Agriculture that we put 100,000 acres into hemp production, I could make the economic case that (first of all) you can get four times as much fiber right away as you could from growing trees — but that, in addition, hemp seed is second only to soybean as a protein source.

It has unusual essential oils: you can make paints, nonpolluting inks, and all kinds of industrial products. You could raise hemp as a seed crop, and after you'd taken the seed the remainder could be used for papermaking.

If you have to take low THC as an essential component, you might make some sacrifices: you might end up with a product where the seed crop is not so good, or the fiber. If I were only breeding for fiber and seed, it would be of no concern to me whether

there was any THC or not. The DEA would say, "Well, that's interesting, but we'll give you the permit only if you use low-THC seed." I'll settle for that. But it would make sense to breed a variety of hemp that not only maximized the fiber quality and quantity, and the weight, quantity, and quality of the seed crop, but incidentally maximized THC — for medicinal use.

Professionally, I am indifferent to THC content. I'm a papermaker. I really want to have a local production, to provide jobs here in Mendocino County. If I had permits, people could cultivate hemp for me under license. I would buy the fiber, which they would first process to some degree, and I would do further processing. This would provide local jobs and eliminate a whole sequence of fossil-fueled transport.

*How do you go about making paper out of hemp stalks?*

It's dried and cleaned. Then I put it into my chipper-shredder to break it down. Then I cook it on the stove in a solution of sodium hydroxide, 20 percent by weight — a very strong alkali. This gets out the lignins and junk — exactly what commercial mills do, only they do more of it because wood pulp is so much higher in impurities.

**I could make the economic case that you can get four times as much fiber right away as you could from growing trees.**

*How do you handle the waste residue?*

By the time I'm through cooking it down, much of the alkali has dissipated; the fiber is rinsed over and over until it's really clean. All that rinsing dilutes the alkali, and the soil here is acidic anyway because of all the conifers; it just goes down my hill and is dispersed fairly safely in a poison-oak patch. That works on a small scale. On a larger scale, it becomes a problem. You could use milder alkalis like sodium carbonate; you could use wood ash. But these are kind of messy, and really too mild for hemp.

*But it's possible that you could combine waste wood ash, which you are producing as a homesteader anyway, with marijuana stalks and come out with paper.*

I would like to experiment with it, if I could get a permit to cultivate hemp and therefore have enough material to experiment with. Wood ash is not so strong an alkali. I was just reading about biological delignification; I would certainly like to experiment with that.

*There is some kind of whiterot fungus that somehow purifies the lignin. I've heard this is one of the secrets of the Chinese.*

Chinese hemp is an extremely fine material — a lot of their processing is done biologically with some enzyme or fungus that takes out the lignins.

To continue with the process: after it is cooked, it is rinsed. Then it goes into the Hollander beater — a machine developed three hundred years ago to process fiber for paper. There is a beater roll with a series of blades; this churns the fiber in water and directs it through this spinning wheel with its blades. Under the wheel is a bed plate; the lower you adjust the roll, the smaller the space between the two: eventually you break down the fiber. Fibers like kenaf beat down very

quickly — half an hour, an hour. We could process kenaf in ten minutes or less if we wanted to be harsh with it. But we like to retain its long fibers.

The hemp takes about eight hours. You're left with paper that is very tough. Too tough: not friendly. By mixing it with kenaf, the hemp is mellowed and the kenaf is beefed up.

*I'd like you to muse a bit on a civilization without wood-pulp paper. A civilization that valued its tree sheath more than its propensity to communicate.*

The canopy holds the land together. All the microclimates are related to trees. Northern California is drying up because they are cutting down all the trees. I have a wonderful water supply — which I need for my paper-making. It all comes from a spring in these hills, and as long as there are trees on the hills, there will be water.

The tree is a hydraulic system. All the trees together make a system that retains the water after it rains; they hold it, and they bring it up from below. Trees know what they're doing.

Trees are already rare, and there is too much paper in the world. Too much junk mail; too much paperwork. Half of all landfills are composed of paper products. The computer revolution was supposed to get rid of paper; instead, you can crank out junk so fast you can hardly believe it. And then you fax it to somebody else, and they photocopy it onto better paper . . . If paper were more expensive, it would be more highly valued.

The role of hemp paper has always been to ensure high quality and long life. Documents. Bank notes. Deeds. The Declaration of Independence. Hemp paper allows for communication with future generations. ♻️



BY ALAN E. MASON

*If you love trees, you ought to know about the reasons why hemp is no longer grown for paper in the US. I'm not a big believer in conspiracy theories, but the story of the suppression of hemp is one that deserves to be more widely known.*

*Alan Mason is a writer, philosopher, and student of shamanic traditions. He and his wife Jacqui are both associate editors and writers for Psychedelic Illuminations, a quarterly magazine of "scientific information, philosophical discussions, literary and artistic works, hard news, and intelligent commentary relating to the modern and traditional uses of consciousness-altering plants and chemicals for personal, spiritual, and cultural growth and change."*

*(P. O. Box 3186, Fullerton, CA 92634; \$27/year, \$49/two years). —HLR*



HAT IS HEMP? IT DEPENDS ON WHOM YOU TALK TO.

If you talk to the person on the street he may not be able to tell you, but there is a fair chance that he, or someone he knows, has smoked it as marijuana.

If you ask folk doctors in most countries, it is the plant that provides healing salves, antibiotics, childbirth aids, and dozens of other medicinals. To the historian, it is the hardy, cheaply grown plant that provided the best material for rope and sail for hundreds of years (the word “canvas” comes from *cannabis*), and was the subject of the first “drug” laws in England and the Colonies — laws that *required* farmers to grow the plant. To the AIDS or cancer patient, it is the plant that combats nausea and appetite loss. To the nutritionist, it has a seed second only to soybeans in nutritional value, and is a source of cooking oil and vitamin supplements. To the paper or cloth manufacturer, it is the plant that provided much of our paper and clothing for hundreds of years and produces four times more fiber per acre than trees, fiber that can even be made into particle-board for building. To the environmentalist, it is the plant that could vastly slow the deforestation of the planet, restore land robbed of nutrients by other crops, prevent erosion, provide biomass and other low-pollution fuels, and vastly reduce our need for pesticides in the process. Unfortunately, to most people in positions of power in this country, it is a useless plant with no economic or medicinal value.

If you don't readily recognize the word “hemp,” you can thank William Randolph Hearst. Up until the 1920s most Americans knew marijuana as hemp or *cannabis*, and the plant was an accepted part of everyday life in

the US. Hearst started using the Mexican slang term “marijuana” in his racist campaign against Mexicans that began around the time of the Spanish-American War in 1898. This campaign, which later expanded to include blacks, Chinese, and other minorities, began when Pancho Villa seized thousands of acres of Hearst's paper-producing timberland in Mexico. By referring to the well-known and accepted hemp plant as marijuana, and portraying it as a drug that causes minorities to rob, rape, murder, and generally disrespect their betters, Hearst created a climate of fear that laid the groundwork for the plans of Harry Anslinger, head of the newly formed Federal Bureau of Narcotics and Dangerous Drugs, and others.

Anslinger pushed the Marijuana Tax Act of 1937 through Congress almost unnoticed. Although this law did not actually make hemp illegal, it taxed it at a rate equal to its selling price — a dollar an ounce at the time — and required growers to register with the government. Although representatives of the seed and lubricating-oil industries, as well as the American Medical Association (!), protested the law, their protests went unheard in the face of Anslinger's testimony — which consisted primarily of reading baseless articles from Hearst's newspapers. In October of 1937 the new Prohibition went into effect disguised as a tax law.

The two other members of this Gang of Four were Andrew Mellon (Herbert Hoover's treas-

ury secretary, Harry Anslinger's uncle-in-law, and banker) and the DuPont Corporation — a major producer of petrochemicals used in the production of paper, lubricating oils, and pesticides. While the full extent of this conspiracy may never be known, its result was the destruction of industries that had provided jobs and valuable products since the Colonies were first founded.

The destruction of the hemp industry did, however, help fuel another growth industry. The passage of the Marijuana Tax Act and the formation of the Federal Bureau of Narcotics spawned our present-day War On Drugs and led to the creation of sprawling government drug enforcement bureaucracies and numberless public and private social agencies and anti-drug groups, all dedicated to the eradication of “drug abuse” — i.e., *any* illegal drug use regardless of its impact on the user. They created vast criminal cartels whose profits run in the billions of dollars, as well as a huge new class of victimless criminals. These laws could even be said to have created a new addiction: that of law enforcement agencies to the funds generated by property forfeiture in times of shrinking public budgets. The lessons of Prohibition were apparently lost on those who tried, and are still trying, to stamp out the use of an innocuous drug which, according to all available information, has never directly caused anyone's death — and which could play a major role in saving the earth's environment and dwindling resources.

One result of these laws is that our prisons are occupied to a large extent (some estimates say upwards of 60 percent) by people whose crimes are "drug-related." Information is scarce as to how many of these are major hard-drug dealers and how many of them are your average citizen caught smoking hemp. However, given that tens of millions of Americans have smoked hemp, and that the number of users of hard drugs is fairly small in comparison, one can reasonably assume that many prisoners are in jail for simple possession of hemp. Mandatory sentencing laws enacted in the most recent wave of anti-drug hysteria have resulted in violent offenders being released while hemp smokers and other nonviolent drug offenders stay imprisoned. The reversal of these laws could do much toward reducing our local, state, and federal budget deficits. For example, a recent informal survey by the Orange County Hemp Council in Orange County, California, indicated that by releasing all current hemp prisoners, and ending enforcement of anti-hemp laws, the county could probably wipe out its budget deficit.

The situation is not without hope. In recent years, major political figures on the right as well as the left have spoken out against the insanity of the War on Drugs and the criminalization of drug use. Over fifty federal judges are now refusing to hear drug cases (in large part, because of the unfairness of the mandatory sentencing laws), and some judges are speaking publicly in favor of decriminalization or outright legalization. Janet Reno, U.S. Attorney General, has stated that she favors educating and treating drug offenders over imprisoning them. Most importantly, some courageous individuals have

uncovered and publicized the history of hemp as a plant with thousands of environmentally friendly uses. Without even considering the economic and social benefits of decriminalizing or legalizing recreational hemp use, the economic benefits of a revitalized hemp industry would be immense. These benefits can be debated without consideration of the legalization issue, as hemp grown for non-smoking purposes is so weak as to be virtually useless as a drug. It is not unreasonable to refer to hemp, in the words of hemp advocate Jack Herer, as the plant that can save the world. ☺

**Some courageous individuals have uncovered and publicized the history of hemp as a plant with thousands of environmentally friendly uses.**

### **Marihuana, the Forbidden Medicine**

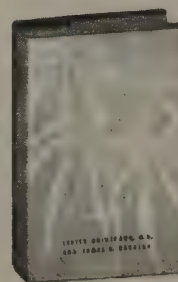
*This book's authors, both on the faculty of Harvard Medical School, describe the effects of marihuana used as medicine for conditions including glaucoma, multiple sclerosis, AIDS, migraines, menstrual cramps, chronic pain, asthma, and mood disorders, including some types of depression. The authors review existing scientific evidence but admit that they have produced "largely a book of stories, because most of the evidence on marihuana's medical properties is anecdotal."*

*The authors note the large effort directed by the federal government to document potential health hazards of marihuana, in order to justify its policy of prohibition. They conclude that "the government is unwilling to admit that marihuana can be a safe and effective medicine because of a stubborn commitment to wild exaggeration of its dangers when used for other purposes." Grinspoon and Bakalar believe the only reasonable way to make marihuana available as medicine would also permit its use for nonmedical purposes. They suggest that marihuana be subject to the same regulations as alcohol.*

*Marihuana is not only useful as medicine, but far less toxic and harmful than alcohol when used for nonmedical purposes. **Marihuana, The Forbidden Medicine** provides convincing arguments for these views and will be a useful reference for drug abuse counselors, criminal defense attorneys, health workers, and*

*others interested in the effects of this widely used substance.*  
—Eugene Schoenfeld, M.D.

■ Although smoked marihuana apparently does not increase susceptibility to infectious disease, there is evidence that THC has immunosuppressive effects. With this in mind, a group of investigators tested its ability to suppress experimental autoimmune encephalitis (EAE), a disease that has been used as a laboratory model of multiple sclerosis in guinea pigs. When animals were exposed to the disease and then treated with a placebo, all developed severe EAE and more than 98 percent died. Animals treated with THC had either no or only mild symptoms, and more than 95



### **Marihuana, the Forbidden Medicine**

Lester Grinspoon, M.D. and James B. Bakalar, 1992; 184 pp. ISBN 0-300-05435-1

**\$22.50** (\$25.50 postpaid) from Yale University Press/Order Dept., 92A Yale Station, New Haven, CT 06520; 203/432-0940

# Tools and Resources

***The Emperor Wears No Clothes***, by Jack Herer (\$14.95; \$16.95 postpaid). ISBN 1-878125-00-1). The premier book on hemp by the George Washington Carver of the hemp movement. Herer is also the founder of HEMP (Help Eliminate Marijuana Prohibition), a great source of information on the plant's commercial uses. Book and other information: 5632 Van Nuys Boulevard, #310, Van Nuys, CA 91401; 818/377-5886.

***Hemp — Lifeline to the Future***, by Chris Conrad (\$12 postpaid). A little hard to read, but packed with a huge amount of information on the history and uses of hemp. Conrad edited *The Emperor Wears No Clothes*, and founded BACH (Business Alliance for Commercial Hemp), another information and lobbying group. P. O. Box 71093, Los Angeles, CA 90071-0093. Hemp Hotline 310/288-4152. They also publish a newsletter, the *BACH Hempire News*.

***The Great American Hemp Industry***, by Jack Frazier (\$12 postpaid). A short but informative book on hemp history in the Americas, both pre- and post-Columbus. It also has a nice list of pro-hemp groups in the front. Solar Age Press, P. O. Box 610, Peterstown, WV 24963.

**NORML (National Organization for the Reform of Marijuana Laws)**: 1636 R Street NW, Washington, DC 20009; 202/483-5500. The mother of all marijuana lobbying groups, NORML is still out there on the frontlines, with regional offices around the country.

**CHA (Coalition for Hemp Awareness)**: P. O. Box 9068, Chandler Heights, AZ 85227.

"A nonprofit foundation founded in 1991 in an effort to unite the varied voices for repeal of [hemp] prohibition." Fun and dedicated folks, they also offer hemp cloth for your next sewing project.

**The Ohio Hempery**, 14 N. Court Street, #300, Athens, OH 45701; 1-800-BUY-HEMP. They offer educational materials on hemp, products such as seeds and oils, hemp cookbooks, cloth and clothing, paper, and twine.

*Dozens of other groups are working at the national, state, and local level for hemp-law reform and the re-birth of the hemp industry. If you live in a major city, there is a good chance a store near you sells hemp products. Check your phonebook or contact one of the groups listed above to find out where you can buy your first hemp hat, hemp paper, or hemp-seed cookbook.*

percent survived. On inspection the brain tissue of the animals treated with THC proved to be much less inflamed.

While we were vacationing in Indiana, the local vice cops raided my house and seized my six-foot marihuana plants. I returned to find a warrant on the kitchen table with a note scribbled on the back requesting that I surrender myself for arrest. I could not know at the time, but being arrested was about the best thing that could have happened to me. Being arrested "saved my sight."

When I told my attorneys I was smoking marihuana to treat my glaucoma, they thought it was hysterical. When they realized I was not joking, they stopped laughing only long enough to tell me to prove it. I spoke with Keith Stroup, head of the National Organization for the Reform of Marihuana Laws. Keith didn't laugh. Instead, he carefully explained that I didn't have a prayer. But he gave me a few phone numbers and suggested I phone around. So I phoned around the federal bureaucracy. Needless to say, I was startled when at least three bureaucrats point-blank told me, "Oh, we know marihuana helps glaucoma. We have lots of data which shows . . ." They knew! They knew and hadn't

bothered to tell me. They knew, but did not want anyone else to know. Remember, this is 1975, not yesterday.

Given a choice between administering a reckless, well-established absolute and catholic prohibition or honestly meeting the urgent medical needs of desperately ill citizens, the drug bureaucrats had, of course, chosen deceit to maintain their institutionally treasured fraud. This is why bureaucrats the world 'round are so beloved by the citizens they serve.

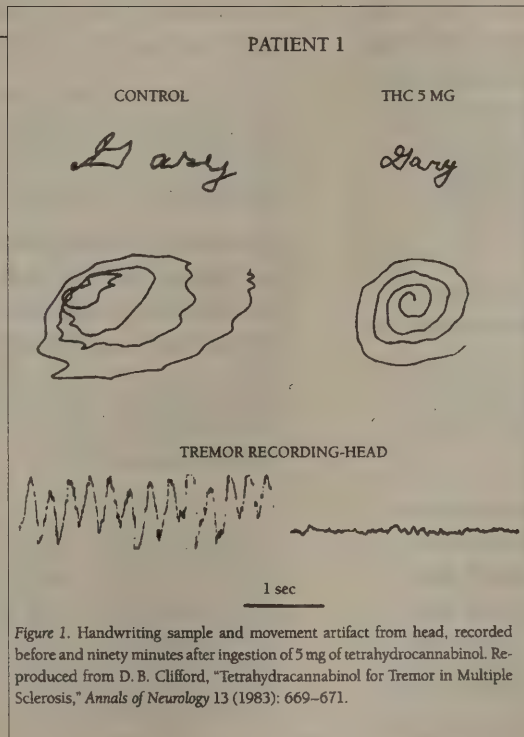


Figure 1. Handwriting sample and movement artifact from head, recorded before and ninety minutes after ingestion of 5 mg of tetrahydrocannabinol. Reproduced from D. B. Clifford, "Tetrahydrocannabinol for Tremor in Multiple Sclerosis," *Annals of Neurology* 13 (1983): 669-671.

# Christian Pandevoationalism

NATURE RELIGIONS that present the material world as a wellspring of spirituality (not just its passive recipient) have been targets of Christian suppression and persecution for 2,000 years. Even so, a strong current of Nature Religion runs unacknowledged through the heart of the Christian tradition — in the Bible, in books of prayer, in church hymns, and in literary works written by the faithful.

Is it paganism? Some might say so. But it's not pantheism. It's not process theology. It's not Teilhardianism. It's what I call Pandevoationalism.

For centuries the prevailing Christian view on Nature, God, and Humanity was that God gave humans "dominion" — lordship — over Nature. Lately, in the wake of human abuse of that dominion, the term "stewardship" has gained popularity. And now a number of Christians prefer to see themselves as "co-creators" with God.

Pandevoationalism flows from a different source. It asks us to join Nature's worship of God. Humans are part of Nature, Nature is part of God, and the part worships the whole. The implication: human life is best when we live within Nature's design and stop trying to improve on it.

The most vivid scriptural reference to this approach is Psalm 148. Other psalms, and other books in the Bible, contain Pandevoational passages. But Psalm 148 gives the fullest treatment. The following excerpt is from the New Jerusalem Bible (Doubleday, 1985), where the song is called "The Cosmic Hymn of Praise."

*Over the last ten years or so, Whole Earth Review (good alternative publication that it is) has examined aspects of Islam, Buddhism, esoteric Judaism, Pantheism, Animism, Paganism, Computers, and other stripes and plaids of belief. But we haven't paid much attention to Christian voices since Jay Kinney's 1983 "Politics and Religion" issue (CQ #39).*

*Dan Clark lives and works in Sebastian, Florida. This article is abstracted from the first part of a quartet of works on Pandevoationalism; the other three are a D. H. Lawrence anthology, a philosophical meditation, and a volume of poems. —Richard Nilsen*

Praise Yahweh from the heavens,  
praise him in the heights.  
Praise him, all his angels,  
praise him, all his host!

Praise him, sun and moon,  
praise him, all shining stars,  
praise him, highest heavens,  
praise him, waters above the heavens.

Let them praise the name of Yahweh  
at whose command they were made;  
he established them for ever and ever  
by an unchanging decree.

Praise Yahweh from the earth,  
sea-monsters and all the depths,  
fire and hail, snow and mist,  
storm-winds that obey his word,

mountains and every hill,  
orchards and every cedar,  
wild animals and all cattle,  
reptiles and winged birds,

kings of the earth and all nations,  
princes and all judges on earth,  
young men and girls,  
old people and children together.

Let them praise the name of Yahweh,  
for his name alone is sublime,  
his splendor transcends earth and heaven.  
For he heightens the strength of his people,  
to the praise of all his faithful,  
the children of Israel, the people close to him.



BY DANIEL CLARK

universal obligation to praise God, which lies naturally upon every creature, after its kind and according to the manner of its special sphere of life."

He went on to say: "Unreasoning creatures praise God by their being, upon which the law of Divine will is impressed; what they do unconsciously, we are to do intelligently and voluntarily."

Implicit in this latter observation rests a deep respect for apparently "unreasoning creatures." Their devotion may be unconscious, but it is constant. Humanity wavers in its devotion. Thus Lange asserted that we would do well to accept Nature as a teacher of religious life.

I doubt that Lange would qualify as a deep ecologist. But he touched on a current that runs as deep as any in contemporary eco-spiritual thought. Because if we humans can consider that the rest of Nature is in some way more in tune with God's law, then we might improve ourselves by living more in harmony with Nature. That is the hidden purport of Psalm 148.

An echo of the psalm is heard in the Apocrypha, in the exaltation added to the book of Daniel called "The Song of the Three Young Men." This hymn reproduces the former litany, with some additions (rain and dew, scorching blast and bitter cold, nights and days, lightning and clouds) and some omissions. The Roman Catholic, Anglican, and Episcopal churches use it in their services to the present day.

Whether the stream of Pandevotionalism that runs through Christian song and poetry is scriptural or spontaneous, the tradition is strong.

Early in the Christian era, Tertullian wrote, "The birds rising out of the nest raise themselves up and, instead of hands, extend the cross of their wings, and say something like prayer." Saint Ambrose also celebrated the flight and song of birds as devotional expression.

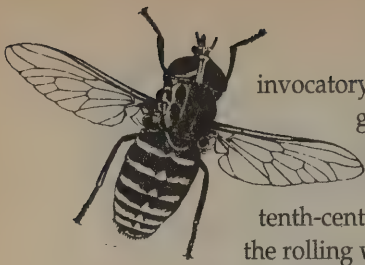
Around 600 A.D., Venantius Honorius Fortunatus composed hymns for Whitsunday, Easter, and Ascension; each proclaimed, "All things created on earth sing to the glory of God." In the eighth century, Saint John of Damascus wrote the same words. Irish

The psalmist — probably King David — was rallying the entire universe to worship. The psychology behind this rhetorical device may not be something we feel comfortable with. But he may not really have considered himself the choirmaster of the creation. On the other hand, did he think of snow and seraphim as equals?

Apparently the poet saw animals, plants, and minerals as possessing at least the potential for faith. He sang of "storm-winds that obey his word." That is, Nature does the bidding of God. In that sense, cedars and sea-monsters are as good as angels. For the psalmist, Nature is always praising the name of Yahweh.

Since humans are part of Nature, such praise is also generic to us. Perhaps it's difficult to understand how all humanity is worshipping the divine. But to the psalmist, every creature was a fellow worshipper. That was meant to be taken literally. The psalm is simple and direct.

Commentators through the centuries have had little trouble, it seems, in assimilating this Pandevotionalism. John Peter Lange<sup>1</sup> remarked on "the



invocatory prayers of the period engaged those wild forces of Nature so resonant in the old Celtic background. A tenth-century Swabian canticle urged the rolling waves and the beasts of the field to sing Alleluia. From the Welsh *Black*

*Book of Carmathen*, set down in the 1100s, we have a poem where not only is "bee-song" called upon to bless the Lord, but also "fine silk." (It's unusual for a manufactured product to be included in the company of the elect. Perhaps not until Hart Crane's "The Bridge" do we come across this again.)

Saint Francis of Assisi, that rhapsodic mystic, dared to say, "Our sisters the birds are praising their Creator. Let us go among them and sing unto the Lord praises and Canonical Hours." Francis not only composed a Pandevotional hymn ("The Canticle of the Sun") but also lived a Pandevotional life to the utmost.

Edward A. Armstrong<sup>2</sup> described the Franciscan lifestyle:

So assimilated to their woodland haunts did Francis and his companions appear that women fled from them and folk spoke of them as if they were more like indigenous denizens of the forest than fully human beings. . . . Those who visited the friars described their sleeping places as like the lairs of wild beasts. . . . we hear of them praying in the woods three times as often as in churches.

Francis sang with birds. His "conversion" of a wolf has become a popular legend. For Francis, "All created things pointed beyond themselves to their Creator." This consciousness Armstrong called "sacramentalism."

With Saint Francis we reach an apex of Pandevotionalism, a rare convergence of theory and practice. But I don't mean to discredit other Medieval or Renaissance contemplatives — Hildegard of Bingen, Mechtild of Magdeburg, Meister Eckhart. Even Shakespeare, in *The Merchant of Venice*, had Lorenzo proclaim, "There's not the smallest orb which thou beholds't / But in his motion like an angel sings".

As Christian cultures grew more complex, the simple life became more difficult to attain. Still, Pandevotionalism took root in literature both sacred and secular.

In *Paradise Lost*, Milton placed on the lips of Adam and Eve an exquisite sunrise version of Psalm 148, and of Lorenzo's music of the spheres:

Moon, that now meets the orient Sun, now flis't  
With the fixt stars, fixt in their orb that flies,  
And yee five other wandering Fires that move  
In mystic Dance not without Song, resound  
His praise, who out of Darkness call'd up Light.

His praise ye Winds, that from four quarters  
blow,  
Breathe soft or loud; and wave your tops,  
ye Pines,  
With every plant, in sign of Worship wave.

Protestantism stimulated a vast output of new prayers, poems, and hymns. Bishop Thomas Ken wrote the Doxology that's been sung for 200 years — a Pandevotional lyric:

Praise God, from whom all blessings flow,  
Praise Him, all creatures here below;  
Praise Him above, ye heavenly host;  
Praise Father, Son, and Holy Ghost.

Worship by "all creatures" formed a constant theme of the greatest eighteenth century hymnist, Isaac Watts. "Nature in every dress," he wrote, "Her humble homage pays / And finds a thousand ways t'express / Thine undissembled praise." Also:

Ye tribes of Adam join,  
With heaven, and earth, and seas,  
And offer notes divine  
To your Creator's praise.

The Augustan poet Christopher Smart took as the central point of his work the creation's adoration of God. Early in his career he wrote:

List ye! how Nature with ten thousand tongues  
Begins the grand thanksgiving, Hail, all hail,  
Ye tenants of the forest and the field!  
My fellow subjects of th'eternal King,  
I gladly join your Mattins, and with you  
Confess his presence and report his praise.

Smart was not content to arrange words on paper. Aware of the implications of his chosen theme regarding human action, he adopted a style of public behavior — spontaneous prayer and preaching — that put him sharply at odds with conventional notions of how to live one's daily life. In his eccentric masterpiece *Jubilate Agno*, he declared, "[T]o worship naked in the Rain is the bravest thing for refreshing and purifying the body." (He yearned for the primitive life, but London held him captive.) Also typical of this poem is the vigorous Pandevotional admonition, "Let man and beast appear before him, and magnify his name together."



The Pandevotional works of Christopher Smart are among the most gifted poetry in our language. In "A Song to David," he gives us these sublime images:

For ADORATION seasons change,  
And order, truth and beauty range,  
Adjust, attract, and fill:  
The grass the polyanthus cheques;  
And polish'd porphyry reflects,  
By the descending hill.

Rich almonds colour to the prime  
For ADORATION; tendrils climb,  
And fruit-trees pledge their gems;  
And Ivis with her gorgeous vest  
Builds for her eggs her cunning nest,  
And bell-flowers bow their stems.

With vinous syrup cedars spout;  
From rocks pure honey gushing out,  
From ADORATION springs:  
All scenes of painting croud the map  
Of nature; to the mermaid's pap  
The scaléd infant clings.

The spotted ounce and playsome cubs  
Run rustling 'mongst the flow'ring shrubs,  
And lizards feed the moss;  
For ADORATION beasts embark,  
While waves upholding halcyon's ark  
No longer roar and toss.

While Israel sits beneath his fig,  
With coral root and amber sprig  
The wean'd advent'rer sports;  
Where to the palm the jasmin cleaves,  
For ADORATION 'mongst the leaves  
The gale his peace reports.

Christopher Smart and the Augustans were followed by the Romantics. Among them, Coleridge, Emerson, Dickinson, and the little-known Jones Very made memorable contributions to the Pandevotional corpus.

Pandevotionalism stresses the active role Nature takes in worshipping God — something that goes on with or without human participation. That's not to be confused with the very human activity of "appreciating" Nature, which might mean advocating the expansion of national parks, or even perceiving Nature as a symbol for a transcendent divinity.

A case in point is the Victorian Jesuit, Gerard Manley Hopkins. Hopkins' natural world turns out to be a place of feeble energies. He looks at the branches of an ash tree and sees "old Earth's groping towards the

steep / Heaven whom she child us by." Even though "The world is charged with the grandeur of God," it's a one-way relationship.

Hopkins' Nature is feminine, passive, and bad. His God is masculine, active, and good. The artistic or metaphorical or meaning-making function of the human mind is what Hopkins values. Nature is just dead, raw material for the poet, and the male God, to bring to life.

In the twentieth century, in his essay "Hymns in a Man's Life," D. H. Lawrence got straight to the Pandevotional point: "Plant consciousness, insect consciousness, fish consciousness, animal consciousness, all are related by one permanent element, which we may call the religious element inherent in all life, even in a flea: the sense of wonder."

His younger American contemporary Hart Crane expressed the same admiration for Nature's devotion to God in the 1929 poem, "A Name for All."

I dreamed that all men dropped their names,  
and sang  
As only they can praise, who build their days  
With fin and hoof, with wing and sweetened  
fang  
Struck free and holy on one Name always.

One of Carl Sandburg's last poems, "Timesweep," wraps up in a terse statement the profession of the Pandevotionalist:

I meditate with the mud eel  
on where we came from.

Lawrence, Crane, and Sandburg might not justifiably be counted among the ranks of Christian writers. But it is a virtue of Pandevotionalism that it can motivate both the orthodox and the rebellious.

Many Christians today, disturbed by the human destruction of God's creation, seek a confirmation in their theology for their empathy with the suffering of the Earth. Pandevotionalism suggests an answer. With its Old Testament heritage, its presence in the religious life of the Church Fathers, and its validity as a continuing literary theme, Pandevotionalism can contribute much to the great work of bringing together Humanity, Nature, and God. ☘

1. *A Commentary on Holy Scriptures*  
(Scribner, Armstrong, 1972).

2. *St. Francis: Nature Mystic*  
(University of California, 1973).



## The Greenpeace Guide to Anti-Environmental Organizations

Here's a sad litany of organized environmental foes and their goals. Their names are benign; some even suggest that they are save-the-world groups. Their financial supporters include corporations making lots of pro-environment noises these days. This little book reveals their villainy. —J. Baldwin

### The Greenpeace Guide to Anti-Environmental Organizations

Carl Deal, 1993; 110 pp.  
ISBN 1-878825-15-4

**\$5** (\$7 postpaid) from Odonian Press,  
Box 7776, Berkeley, CA 94707



**Citizens for the Environment (CFE)**  
470 L'Enfant Plaza SW/Washington DC  
20024/202 488 7255

Citizens for the Environment describes itself as a "grassroots environmental group that promotes market-based methods for protecting our environment." Despite this claim, it has no citizen membership of its own. Founded in 1990 as an offshoot of Citizens for a Sound Economy (a right-wing "consumer" group), CFE is a think tank and lobbying group that advocates strict deregulation of corporations as the solution to environmental problems.

It rallied opposition to the Clean Air Act of 1990 and to California's Proposition 128 ("Big Green"), a broad environmental package to improve state regulation of toxins. Congress passed the Clean Air Act, but Proposition 128 was defeated.

CFE scientist Jo Kwong urges the public to "discard the hype" circulated by environmentalists. She identifies sixteen environmental problems that she says are a sham. These "myths" — acid rain, natural-resource depletion and shrinking landfill space — "dictate public policy" Kwong complains.

CFE argues that industry has always played a positive role in protecting the environment. "The introduction of free-market economics — which occurred about the same time as the American Revolution — enabled us to grow wealthier, which in turn gave us the technology to grow healthier," CFE President Stephen Gold told an EPA conference. "Two centuries later, we've reduced and even eliminated many of our previous environmental threats." Gold concludes that natural resources will be preserved for future generations only "by

channelling the powerful forces of the marketplace — that invisible hand — to enable this country to enter the next century cleaner and healthier than ever before."

#### Funding

CFE's parent, Citizens for a Sound Economy, is partially funded by:

Alcan Aluminum • American Petroleum Institute • Ameritech • Amoco • Association of International Automobile Manufacturers

• Boeing • Chevron • Coors • General Electric • General Motors • Georgia-Pacific • Honda North America • Hyundai America • Kobe Steel • Mobil • Nissan • John M. Olin Foundation • Phillip Morris • Rockwell International • Sarah Scaife Foundation • Sony • Toyota • Union Carbide • Xerox

#### Officers

Stephen Gold, President • Michael Giberson, Senior Analyst • Angela Logomasini, Senior Analyst

## Native America

This is one of the best introductions to native American culture as it exists today. Brief tribal histories are accompanied by maps and fine color photographs. Unlike most similar books, many of the authors and photographers are native

Americans. Little current controversy is included, but you'll learn about those soon enough when you visit. A person could build many a rewarding trip around this book. Scholars will seek more depth elsewhere. —J. Baldwin

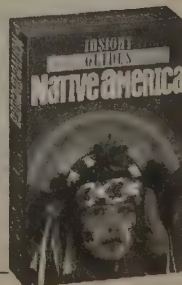


**Fishing at Warm Springs Indian Reservation, Oregon — home of three tribes: Warm Springs, Wasco, and Paiute.**

### Native America

John Gattuso, Editor. Insight Guides, 1993; 389 pp. ISBN 0-395-66176-5

**\$19.95** (\$21.45 postpaid) from Houghton Mifflin Company/Mail Order Dept., Wayside Road, Burlington, MA 01803; 800/225-3362



## The Southern Forest

Laurence Walker, a retired forestry professor at Austin State University, knows a hell of a lot; and he knows about a lot of things besides trees too. As the jacket blurb says, "It is as much a commentary on Southern culture as it is on Southern forests." He doesn't twist his narrative up in theory or jargon, either.

The book begins with the early European explorations, moving through the pioneer period, the lumbering and boat-building eras of the nineteenth century, the rise of modern forestry, and concluding with thoughts on the current ecological movement. As one himself, I guess Walker can be forgiven for presenting the scientific forester as his book's hero. In general, the historical drift he depicts is from destructive ignorance (the pioneers), through consciously destructive practices (the lumber companies), to scientific enlightenment (modern foresters). There is a subtext of pride in the South for managing the conflict between economics and the environment better than the Northwest.

Besides the vast amount of information the book contains, two other appeals are Walker's anecdotes, folklore, and local color; once we get to the twentieth century, we begin to get Walker's observations from his own surveys and studies.

The section of the book on the lumber companies is fascinating, if disturbing. Here too we get details — this time of the rape of the Southern forest and the exploitation of the loggers. The theme that emerges is that federal and academic forestry programs saved the day — one pushing legislation such as the Weeks Act, and the other pushing various management regimens of sustainable silviculture. —Tom Barden



### The Southern Forest

Laurence C. Walker, 1991; 322 pp.  
ISBN 0-292-77648-9

**\$29.95** (\$32.45 postpaid) from University of Texas Press, P. O. Box 7819, Austin, TX 78713-7819; 800/252-3206

■ But fire in the days of de Soto's ventures would also play a role in maintaining habitat for many kinds of wildlife. Quail, turkeys, and white-tailed deer, especially of value to people for food, foraged and browsed among the stems in stands burned at various periods. The amount of overstory and understory depend on the time lapsed since the woods were last burned. As the birds depended upon insects and the white-tails upon succulent woody browse for food, fires affected the abundance of both during various periods. De Soto also noted no limit to the fish as he trooped from swamp to swamp. And cabbage from the low palmetto on the islands provided food.

While writers about natural resources in the present environmental age often dwell upon the Indians' so-called balanced ecological system, at least one noted historian of the region entered a partial dissent: "The southeastern Indians were . . . evolving complex cultures, . . . not part of a balanced self-maintaining system. Like the whites and blacks of a later day, they pressed against the land's resources and reshaped its forms in lines with their own desires." The same historian reports that



Virgin longleaf pine in Deep East Texas.

in the early 1600s, sailors smelled smoke as they sought docking sites off Virginia's shore, and that one wrote, "The land was smelt before it was seen."

## Guide to the National Wildlife Refuges

More than 200 refuge managers — as loving a group as you're likely to find — worked with the authors to describe their areas and the vulnerable denizens thereof. Many welcome well-behaved visitors for ganderling (in Okefenokee, GA, we watched hundreds of storks all dancing to the same rhythm), hiking, boating and even camping — usually under strict rules (refuges are not parks). The *Guide* offers enticing descriptions of the refuges, with access information arranged by state. Wildlife refuges need our support; a few are even under consideration for use as bombing ranges! Why not take a few years off to visit them all? Hmmmm. —J. Baldwin

### Eufaula (Alabama and Georgia)

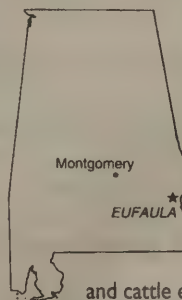
Birders can always find something of interest on these 11,160 acres of upland, woods, and marsh superimposed on Lake George, a Corps of Engineers reservoir in the Chattahoochee River at the southern boundary between Alabama and Georgia. It has been called by the Georgia Ornithological Society one of the ten best bird walks in that state.

Endangered wood storks visit, along with such rarities as the Ross' goose and occasional roseate spoonbills. Two sizable nesting colonies support several thousand birds, great blue herons along with great

### Guide to the National Wildlife Refuges

Laura and William Riley. Collier Books, 1979, 1992; 684 pp. ISBN 0-02-063660-1

**\$16** postpaid from Macmillan Publishing Company, 100 Front Street, Riverside, NJ 08075; 800/257-5755

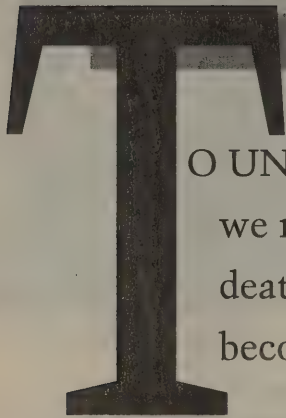


and cattle egrets, white ibises, and other graceful waders. One is visible to hikers; the other, in a closed area, is opened by request to organized groups. . . .

One of the best ways to see this refuge is by canoe (bring your own) — paddling quietly along sloughs where otters fish and sora rails step delicately through willow thickets. Fish often can be seen feeding in the clear water — increasingly in this rapidly developing area Eufaula is an island of pristine water quality and a remnant of the lush oak savanna and riparian habitat once common here.

# The Health of Humanity

BY LARRY BRILLIANT, M.D., M.P.H.



TO UNDERSTAND THE HEALTH OF ALL OF HUMANITY, we must begin to understand something about life and death in a part of the world with which most of us never become familiar.

To shoot a snapshot of life and death in Third World or developing countries, to compare it with what we are used to in America, I'm going to go back and forth between two very different kinds of communities, two very different kinds of lives.

Americans (at least wealthy white Americans), as well as most Europeans and Japanese, now live out the Biblical three-score-and-ten years of life as their children grow to the fullness of adulthood. In the Other Half of the world, life is short, death is brutal, and poor parents watch helplessly as up to half of their children die from diseases that hold no mystery for modern medicine.

In wealthy countries the most common causes of death are the chronic, degenerative ailments mostly caused by overconsumption; the bulk of deaths in the Third World today are children, dying of causes directly linked to underconsumption.

*In the 1960s, Larry Brilliant was a full-tilt Hog Farmer, involved in all that mischief that people like Ken Kesey and Wavy Gravy and Ram Dass and Stewart Brand were stirring up. In the 1970s and 1980s he completed his medical education and worked with a dedicated multinational team on an ambitious goal — to wipe out the age-old scourge of smallpox. They succeeded, making medical history in the process, and showed the true potential of the medical specialty known as “public health.”*

*In 1978, Dr. Brilliant cofounded Seva, an international volunteer organization dedicated to curing blindness in Asia (see “Seva: The Eyes Have it,” by*

## We are beginning to see the system fall apart: the sick get poorer and the poor get sicker.

The World Health Organization (WHO) is the UN agency responsible for disease control in over 150 nations; in many ways, it is the heart of the international health community. I first joined WHO in 1972, as a medical officer fighting smallpox. It was my first job, straight out of internship. My first meetings at WHO fed my idealism. The first smallpox meeting I attended in New Delhi had tall blond Swedes, black Africans, ruddy Mongolians — the faces around the table seemed like the colors of the rainbow. Of course, I was a product of San Francisco

in the sixties.

**Wavy Gravy, WER #76:94). Brilliant's previous article for WER ("Computer Conferencing: The Global Connection," #71:18) was about the way Seva used conferencing systems to help save people's eyesight in Nepal — an experience that led him to co-found the WELL in 1985.**

**What the world needs now is a million Larry Brilliants. In the following pages, he shows us how debates about the cost of public health care look in the context of the biggest whole system in the health care realm. This article was adapted from a speech Dr. Brilliant originally delivered to a group of physicians. —HLR**

annual per-capita expenditure on health care is one or two dollars. Each of us probably spends more on breakfast than many countries spend *per year* on health care for each of their citizens.

As bad as this sounds, it is going to get worse. The few resources we have are going to be shared

by more people each year. It doesn't take a crystal ball to see the future: less pie, thinner slices, more hunger.

In 1950, there were 2.5 billion of us. In 1969, when I was an intern, there were 4 billion of us. Today our global population stands at 5.3 billion — and it is growing by more than 2 percent per year. If this continues, the expected doubling time for our species is less than 35 years. The UN Population Fund announced recently that humanity is on course for 11 billion by the next generation.

Global population increases by more than one million each week. *Lancet* pointed out last year that if a bomb like that which destroyed Hiroshima had been detonated every day since August 6, 1945, it would not have reversed the increase in our numbers. Each year the net gain in the world's population exceeds the combined populations of Mexico and Central America put together.

Of course, the issue is not only how many of us there are: 10 percent of the world's population consumes 60 percent of the world's raw materials. The poor in the wealthy countries, and even the wealthy in the poor countries, don't get much chance at the dinner table. How difficult will it be to bring any semblance of wealth to our brothers and sisters when there are 11 billion of us in the family? With 4 percent of the world's population, America has nearly half of the world's wealth.

We are beginning to see the system fall apart: the sick get poorer and the poor get sicker. The poor countries are hit with a triple whammy: population, disease, environmental degradation.

Take one small country: Bangladesh. In the next millennium, Bangladesh will have as many people as the current US population, in a space the size of Northern California. Bangladesh will have more than four million deaths each year. Think about that. This is an apocalypse. Nobody can comprehend what so many deaths in such a small area will

mean to the quality — to the meaning — of life in countries like Bangladesh.

And HIV/AIDS is now officially a pandemic, the first real pandemic since the 1917 swine-flu epidemic. Stan Foster of the CDC estimates that 50 million Africans will die from AIDS in this century. In fact, Stan says that the 1990s will be the decade not merely of the deaths of individuals from AIDS, but of the death of countries and cultures. He asks: what does national survival mean in countries like Uganda and Zambia, and elsewhere in Africa, where one of three pregnant women is HIV-positive? A third of their offspring will be positive. The other two-thirds will lose their mothers. Who will care for the orphans?

## Death in America

In America, each year, on the average, there are about two million deaths. This is very low, in relative terms; we have a death rate of only nine per thousand. It is likely that about half the people reading this will die of cardiovascular disease, one-fifth will die of cancer, one-tenth from accidents. AIDS, which by the end of this year will have caused the death of over a quarter of a million Americans, is now the cause of about 1 percent of American deaths each year.

Despite AIDS and the recrudescence of TB, virtually no communicable diseases are among the top killers in the US. The nation has gone through what is called the "epidemiological transition" — a change in the pattern of disease from waves of infectious epidemics into a high-technology society where people die old from chronic diseases. With this change — away from visible epidemics, from high attack rates in communities besieged by disease, from easy-to-identify etiological agents and short incubation periods — the face of public health has changed dramatically.

Today most of the diseases that claim American lives are insidious, with long periods of latency, having multifactorial, often variable or obscure, etiologies and low overall frequencies in the population. Only recently have we thought of calling cancer (which claims the lives of 20 percent of us) an epidemic. Of course, of every five Americans alive today, one will die from diseases caused by cigarette-smoking alone. I should say that again: 20 percent of all American deaths last year are attributable to cigarette-smoking. Ninety-six percent of lung can-

cer is attributable to this habit; in addition, over 25 percent of deaths due to cardiovascular disease would have been averted had the patient not smoked. Ten times as many Americans are dying from the results of cigarette smoking as from the results of HIV.

Four hundred and thirty thousand American deaths each year are attributed to smoking. Tom Novotny, of UC Berkeley via CDC and the surgeon general's office, estimates that last year more Americans died because of smoking than from the sum of all homicides, suicides, AIDS, alcohol, drugs, and automobile accidents. Of course, that is not to demean our attachment to violence: a homicide every twenty minutes, a rape every seven minutes, a child murdered every four hours.

This nation has changed. Our culture and our diseases have changed. We live differently; we die differently. These changes in the pattern of disease have also changed the pattern of medical practice and the face of public health in this country. In my home state of Michigan, when the Top Ten list of

**The poor countries are hit with a triple whammy: population, disease, environmental degradation.**

killers was dominated by acute infectious diseases, society gave emergency police powers to public-health officials. So sweeping were these powers that the Michigan Director of Public Health and Safety held the greatest power that a free society can give to any nonelected official: the right to arrest and imprison the governor, if in the director's opinion he had an incapacitating disease. Can you imagine if doctors could still arrest politicians because they were a danger to the health of the nation?

High stature for public-health officials is gone from our national agenda today. Most clinicians barely conceal their disdain for the entire profession of public health. As a profession, public health has lost the allure it had in the days when it attracted the best and the brightest. One major reason is that the pattern of disease today is not as amenable to immediate and dramatic public-health intervention (improving sanitation, insuring safe drinking water,



and carrying out mass vaccination programs). It's not that public health is any less important. But today, the diseases that kill Americans are not as clearly linked to public health as they were two generations ago, when smallpox, typhoid fever, plague, and polio dominated newspaper headlines as cancer and heart disease do now.

Vaccines and routine public-health systems have controlled most of the transient and highly visible epidemics. That, after all, is the goal of public-health professionals: to work themselves out of a job. During the smallpox campaign, it was our stated intention to eradicate our jobs as we eradicated the disease. I have seen over 5,000 cases of smallpox; I will never see another. It gives me great pleasure to be an expert in a disease which I will never see again and which, thank the good Lord, will never again scar, maim, or kill a child anywhere on this planet.

In fact, in America, virtually all the vaccine-preventable diseases — mumps, polio, pertussis, rubella, diphtheria, tetanus, rabies — are moving toward control or extinction. Leaving aside measles, there are about 100 deaths from these vaccine-preventable diseases in the US each year. That's almost the irreducible minimum. Although the diseases still have frightening names, they are not a reality for most American physicians or patients. By comparison, consider the "innocuous" disease of chickenpox. There were nearly 200 deaths last year in the US from the chickenpox virus. That's about twice as many deaths as from the rest of the vaccine-preventable diseases!

We need the statisticians and the tools of epidemiology to keep a handle on these rapidly changing disease patterns. These same statisticians are warning us that high-technology American medicine has reached a point of "diminishing marginal returns." Even if America succeeded in eradicating the most frightening disease left — cancer — the life expectancy of the average American, which is already over 75 years, would increase by only 1.8 years. If we eradicate heart disease, life expectancy would increase by less than 5 years. Statisticians point out their "theory of competing causes of death" in which, as the average age of a population increases, the "years of life retrievable" by elimination of one disease become fewer.

Whatever we think of the statisticians' theories, death is an unavoidable part of life, and the increasing technological and medical sophistication of American medicine will not change that fact. It will, however, make it possible, in this society, to choose how we die.

Researchers at the Kennedy Center for Bio-Ethics

at Georgetown University took nationwide death statistics and computed what would be the pattern of death if both cancer and heart disease, our two major killers, were eliminated. I can just imagine the computer spitting out its reply with all the objectivity of its species: IF YOU ERADICATE BOTH CANCER AND HEART DISEASE YOU WILL GET 415,000 DEATHS FROM STROKE, 109,000 DEATHS FROM PNEUMONIA, 23,000 DEATHS FROM SUICIDE, 14,000 DEATHS FROM MURDER.

## Death in the world

What is the most common cause of death in the world today?

Not heart disease, although cardiovascular disease claims about 50 percent of American lives. Worldwide, most people don't live long enough to encounter myocardial infarction or cerebral ischemia. It's not tuberculosis, although that disease is on the rampage today, claiming nearly one-third of all the so-called "avoidable" deaths in the developing world. Technically speaking, it is not famine or malnutrition. Common malnutrition is an important underlying *cause* of much of the death in the world, but I don't think it fits the criterion for "cause of death" on death certificates. Measles? An important cause of death in the world, perhaps claiming as many as 1.2 million childhood lives every year — 500,000 in West Africa alone; that compares pretty starkly with the 20 deaths or so Americans had each year from measles before we backslid. But measles isn't the major killer in the world. Nor is malaria, even though it's making a tragic comeback.

The top killer in the world today?

Let me answer that question with a question. What do you think the odds are of a single child getting two or three distinct diseases on the same day — let's say diarrhea, measles, and respiratory disease?

Here, it would be unheard of. But a study in rural Indonesia found that village children had, on average, 18 bouts of diarrhea a year, each lasting 10 days. That's 180 days a year with diarrhea, 180 days a year without. We call that a point prevalence of 50 percent. On a given day, in a typical village in the Third World, half the kids will have diarrhea.

If a population is not vaccinated, 95 percent of kids get measles before they are teenagers. That means almost all kids will get measles; half of them will have pre- or coexisting diarrheal disease, perhaps from a rotavirus, on the same day.

Add to that a pre-existing malnutrition, insufficient vitamin stores, and the ubiquitous upper respiratory infection, and you now have the common denominator for most childhood deaths in the world. I am



not talking theory or history. This is 1993, and this is how the other half dies today.

Epidemiologists call these three diseases the synergistic triad. The synergistic triad is a way of expressing "life expectancy" in terms other than the number of years of life expected at birth.

## Infant mortality

Americans are born in hospitals, to relatively affluent parents who have the money for good infant nutrition and who spend dollars on cribs and bassinets and the other paraphernalia of infancy. With periodic "well-baby care," we lose only 1.5 percent of infants before the first year of life, and most of these are to congenital malformations. True, the US doesn't do that well in infant mortality: seventeen other nations have much lower infant mortality rates than we do. Black infants in our central cities die at twice or even three times the rate of white babies. It

is unconscionable that we lose even a single infant to crack or a single child to bullets in our cities. But in the aggregate, the picture for the developed countries is pretty much the same: 98.5 percent of the babies born in the West and in Japan live to celebrate their first birthday; 97 percent survive to adulthood.

In Bangladesh and in many parts of Africa, the average child is born to a woman who has had a birth interval of less than three years. She has probably gained less than 15 pounds during her pregnancy and her fetus has begun life malnourished. Children in many African and Asian countries are given a name not at birth, but after a month or so of life: it is usual to find areas of the Third World where 10 percent or more of the infants die before they are 40 days old. Much of this high neonatal mortality is attributable to vaccine-preventable tetanus.

As many as 50 percent of all live births end in death before the age of five in these same countries, where

## Health and the Rise of Civilization

*Health. Rise of Civilization.*

*The title of this fascinating book reminds me of what Gandhi replied when asked what he thought about Western civilization.*

*He said (it is reported) that it would be a very good idea.*

*So what does Mark Nathan Cohen think about the improvement of human health as history progresses? He says, in a similarly cynical fashion: It would be a very good idea. However, that's hardly what his evidence actually shows.*

*Just as our own ethnocentrism makes us think of "Western" and "Civilization" as synonyms rather than as an oxymoron, so too does our blithe acceptance of the notion of "progress" blind us to the evidence that the march of progress brings dis-ease as often as health.*

*By taking a huge view — from the beginnings of the evolution of humankind to our sojourns in space — Cohen asks: what have we given up, in the name of progress, to buy our shiny new medical technology? And: how much better is the health of the average Homo sapiens on this planet? Not much, if any, he concludes. And at a price that desperately needs to be renegotiated.*

—Larry Brilliant

■ Taken together, the three lines of inquiry — the extrapolation of epidemiological rules, the study of contemporary groups,

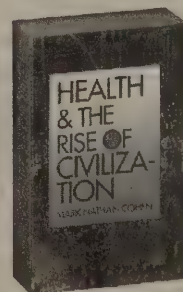
and the analysis of prehistoric skeletons and mummies — paint a surprising picture of the past. They suggest a pattern of changing health associated with the evolution of civilization that is more complex than we commonly realize. If the evidence confirms some of our own proud image of ourselves and our civilization, it also suggests that our progress has been bought at higher cost than we like to believe.

■ If human societies get larger, parasites spread more readily. This means that a higher percentage of individuals will be infected. But it also means that each infected individual is likely to receive a higher dose of the parasite (that is, to be infected by more organisms) as a result of repeated acts of infection. An individual may get a more severe illness, since the outcome of the infection often depends on the size of the dose received (as well as on the success of the organism multiplying in the body). In short, both the number of infected individuals and the proportion of severe cases should increase.

■ There is also evidence, primarily from ethnographic sources, that primitive populations suffer relatively low rates of many degenerative diseases compared, at least, to the more affluent of modern societies, even after corrections are made for the different distribution of adult ages. Primitive populations (hunter-gatherers, subsistence farmers, and all groups who do not subsist on modern refined foods) appear to enjoy several nutritional advantages over more affluent modern societies that protect them from many of the diseases

that now afflict us. High bulk diets, diets with relatively few calories in proportion to other nutrients, diets low in total fat (and particularly low in saturated fat), and diets high in potassium and low in sodium, which are common to such groups, appear to help protect them against a series of degenerative conditions that plague the more affluent of modern populations, often in proportion to their affluence.

● These data clearly imply that we need to rethink both scholarly and popular images of human progress and cultural evolution. We have built our images of human history too exclusively from the experiences of privileged classes and populations, and we have assumed too close a fit between technological advances and progress for individual lives.



### Health and the Rise of Civilization

Mark Nathan Cohen, 1989; 285 pp.  
ISBN 0-300-05023-2

**\$13** (\$16 postpaid) from Yale University Press/Order Dept., 92A Yale Station, New Haven, CT 06520; 203/432-0940

less than 40 percent of the population has access to a health facility.

Malnutrition is a certainty in countries like Bangladesh and Nepal. We often hear that there are ten thousand deaths a week in the world from hunger. But even more numerous are those who do not die directly from lack of nourishment, but whose malnutrition contributes to a type of life unthinkable to Americans. The Bangladesh nutrition survey showed that 80 percent of the children in that country were either stunted or wasted. Only one child in five is not malnourished. Can you imagine living where only one child in five is not malnourished, and one-half of all the kids die before kindergarten?

Diarrheal death; the synergistic triad; whatever. We are talking about 20 million kids a year — as many as 10 million deaths each year on the Indian subcontinent alone. Ten million preventable deaths. How are these deaths preventable? First of all, through education.

I know what picture comes to your mind: a village-level health worker instructing peasants about hygiene. That is not the kind of education I am talking about; as important as it is, that is education of the powerless. I mean education of the people who hold the power. What about American physicians, who are opinion-leaders in a very profound way?

Why aren't international health issues taught in college? Where are the career paths for new physicians and nurses and allied health professionals in fighting the diseases with the long names that afflict so many of our brothers and sisters?

How can we call ourselves healers when half of the children somewhere are dying before kindergarten age? Part of the problem is simply our ignorance; part of it is that we cannot deal with the numbers: they are too staggering. (You have perhaps heard the quote, "A million deaths is a statistic; a single death is a tragedy." If you think that's a good quote for a clinician to parry the cold advances of the statisticians, consider its source: Joseph Stalin. Lousy role model.) To some extent, this explains the genuine compassion an American physician has for one patient dying at age 80 of cancer, and the lack of concern we feel for the epidemic of unnecessary childhood deaths around the world.

Another part of our indifference is, I believe, resig-

nation. How can I do anything about it? Nothing can be done. There is no hope. Everyone in international health feels that way sometimes.

## Do not despair

I was in Iran in 1978, as the Shah was leaving and the Ayatollah was returning. One of the last UN officials evacuated just before the Embassy fell, I was visiting a small village outside of Tehran. My job was to ferret out long-hidden epidemics of smallpox suppressed under the Shah. At the mud hut of the village leader, a saddened mother heard that there was a WHO team in the village. She ran to our jeep, keeping it from leaving. When I climbed down from the jeep, she handed me her child — a boy of four or five — and asked me for help. There was nothing I could do; the child was dead, one of millions of children to die that year from measles. As I held the



Ruth Cashman

dead child, a Phantom F-16 flew overhead — an export of the US military/industrial community to the Shah's government. As in so many other places, at so many other times, there was money for arms, no money to vaccinate the children.

When I came back from Iran, a group of us started the Seva Foundation. We did not want to keep counting the things that could not be changed; we wanted to change the things that counted.

My friend Ram Dass tells a story: he was in Benares, the holy city in North India where the devout go to die. He was standing near the crematoria on the burning ghats — the place on the Ganges where bodies are burned and floated out on makeshift barges. Beggars, lepers, amputees, the terminally ill

lined the stairway down to the river. Ram Dass had a few dozen coins in his pocket.

What does a good man, an ethical man, do? (He asked himself.) How do you allocate your coins? How do you decide? Does a man with no legs deserve more coins than a man with no hands? Should the leper get more than the blind man? Do you give one rupee for a missing leg, two for each lost eye?

How damnably absurd!

(Phantom jets fly overhead while babies die from diseases that hold no mystery for our vaccines and our medicine.)

How damnably absurd to choose between the blind, the lame, the amputees — as if we could create the hierarchy of suffering and a hierarchy of recompense.

**Can you imagine living where only one child in five is not malnourished, and one-half of all the kids die before kindergarten?**

How damnably absurd that we have to choose between allocating resources to end hunger in this generation or forestalling the environmental ruin of our children's generation.

Do not despair. Things aren't as good as they could be, they aren't as good as they should be, but — thank God — they aren't as bad as they were.

Fifteen years ago, when I held that dead child in my arms in Iran, there were 30 countries with an average life expectancy under 40. Today there are none. Fifteen years ago, there were 40 countries with an infant mortality rate of 150 deaths per thousand; today there are virtually none.

All over the developing world, we see improvements in child survival. Fifteen years ago, less than 10 percent of children in the developing world were protected against measles, polio, tetanus, diphtheria, pertussis, and TB. Today more than 80 percent of children in those same countries are immunized.

Even with the losses from AIDS, Africa's life expectancy is increasing faster than that in the US, Japan or

Europe. In fact, it is increasing faster than at any time in the history of the US.

Victories are also being won in the battle against blindness. The Aravind Eye Hospital, in Madurai, South India, stands out. Last week, one patient was operated on for cataract blindness and an intra-ocular lens was implanted. What was the big deal? Aravind does 50,000 operations a year. But this one was different: the lens had been manufactured at Aravind at a cost of under \$5 — making good sight available at a price most of the world can afford. The operation costs under \$35.

In Nepal, despite rapid political changes and unrest, this year the lines may cross: as many blind persons will get their sight restored as persons will become newly blind. A small step, with a large backlog remaining, but an important milestone on the road to victory over blindness. Other signs of good news:

breakthroughs in the treatment of trachoma, in an understanding of the role of vitamin A in child survival, in the establishment and training of an army of workers in the fight against blindness, and in the remarkable harmony and good will that now characterize that group.

But there are 27 to 35 million blind in the world, and over 400 million disabled. Can we ever win? There are so few of us; the task is so large. Can a small band

of dedicated souls make a difference sufficient to change history?

It was so for smallpox, it was so for polio, and, according to the great anthropologist Margaret Mead, it has ever been so. She said that in her review of the history of great ideas, it is only through a small dedicated group that any progress is made.

Let the successful conquest of smallpox provide some of the hope that you will need to fight and win. The only disease shared equally by all — black and white, rich and poor, First World, Second World, Third World — is smallpox. This single disease is shared equally, because it is no longer there to be shared.

No one dies from smallpox any more, anywhere.

### **The end of a disease**

In 1974, when India exploded her first nuclear device, reporters rushed to New Delhi from their stations in Singapore and Hong Kong. What greeted them was a symbol not just of India's modernity, but of an ancient scourge as well.

The headlines in the New Delhi papers the previous day had been about the worst epidemic of smallpox in history. In 1974, so many children died of smallpox in parts of northern India that the rivers did not run, they were so clogged with dead bodies. Over 188,000 cases of smallpox occurred that year in India. The reporters who covered the story of the nuclear explosion could not resist the temptation to mock India: one foot in the atomic age, the other in the dark ages of ancient plagues.

Twelve months later, India had no smallpox. An enormous public-health campaign involving over 100,000 health workers had visited every village and every house in India to search out the last cases of smallpox and build a ring of immunity around each one. India had over 100 million households; we visited each house every month for 20 months — over 2 billion house calls.

That victory gives strength to all who fought it. It inspires others to believe that such victories are possible: they are encouraged to take on other difficult tasks, like polio, AIDS, diarrhea, blindness.

One of the people most responsible for the eradication of smallpox was Bill Foeg, subsequently head of CDC and now director of the Carter Center. Bill recently wrote:

The philosophy behind science is to increase knowledge; the philosophy of medicine is to use that knowledge in order to help patients, but the philosophy of public health is social justice — to use that knowledge for the greatest number of people. We have to keep reminding ourselves why we do this.

But it is hard to continue to remind ourselves of the ethical framework that would allow us to focus on social-justice issues, public-health issues, issues of the Third World. The incentives are all in the wrong direction.

If public health's mandate is to meet the needs of the greatest number, then it reflects the spiritual imperative enshrined in Judeo-Christian ethics and teachings, a point of view also poignantly articulated by Mahatma Gandhi in 1947:

I will give you a talisman. Whenever you are

in doubt or when the self becomes too much with you, apply the following test. Recall the face of the poorest and weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use over his own life and destiny. In other words, will it lead to self-reliance for the hungry and spiritually starving millions. Then you find your doubt and your self melting away.

This is another kind of affirmative action: to seek out the poor, the disenfranchised, the most vulnerable, and to proactively try to put our little good will where it may do the most. Gandhi's affirmative-action imperative forces us to think in terms of redressing historic wrongs, of seeking out ways to improve the lot of the poorest.

I lived in India for almost a decade, most of that fighting smallpox. When all our research, all our papers, all the computer runs were finished, perhaps the most valuable finding we discovered was that, to eradicate smallpox, we had to go to the most remote village and find the poorest people of the lowest caste, who were inevitably at greatest risk of contracting the disease. We visited 150,000 villages every month; only by vaccinating the high-risk population, the poorest of the poor, were we able to stop the epidemic. To rid humanity of the ancient affliction, it was necessary to go out of our way, proactively and disproportionately, to protect the poorest and most vulnerable members of the global village. I think of this as a parable and as an impor-

## Meaning and Medicine

*Modern medicine is based on standardization — the assumption that the criteria for symptoms, prognoses, and curative practices can be measured and objectified. Individuals with a particular set of symptoms are expected to be helped by the same course of treatment, and the percentage who will recover can be predicted. This fascinating book brings us face to face with a quite different perspective, one which taken to its extreme would create a totally different — and ultimately individualized — medicine.*

*Dossey argues that an important factor has been overlooked in modern health care outcome, and that is the meaning — the significance attached to an individual's interpretation of an event. Standard tests can measure "significant life events," which are known to influence susceptibility to disease. Yet such life events — the death of a spouse, the loss of a job — could have a very different subjective meaning to differ-*

*ent people. For one, the death of a spouse may mean the irreconcilable loss of a beloved partner in life. For another, whose marriage was joyless and filled with anger, it may mean freedom from a trap that sapped life energy. Each interpretation of a similar event will have a different health consequence. Ultimately, meaning must be understood within the context of an individual life and within each situation as it arises.*

*Dossey's analysis creates a coherent context for many interesting phenomena and curiosities of modern health literature — such as the placebo effect, nonlocal action, miracles, and so on.*  
—Nola Lewis

• I have spent most of my life listening to people's stories. I've heard thousands of them — in examination rooms, hospital corridors, emergency departments, in parking lots, even on battlefields. I've heard

tant lesson in the quest for moral guidance.

I do not know how to quantify this lesson, nor how to translate it into a cogent economic rationale sufficient to motivate the medical community to assume a disproportionate commitment to the needs of the Third World, and to the needs of what amounts to Third World poverty in our own inner cities. I do know that without making a conscious commitment to such an effort, the medical community will be unable to free itself from the circles of bondage that tie us to self, family, state and nation. Without such a commitment, American medicine will be irrelevant to the needs of the poorest and most vulnerable members of the global village.

Think about the child dying of measles in Iran, the harsh realities of choices faced by a traveler in Benares, and the admonition of Gandhi. Find a way to help. Your life will be richer for it. ☺

them day and night — sometimes, I confess, I have been more asleep than awake. Some I've wanted to hear, some not — the "cocktail party consultation," the "restaurant recital," or the middle-of-the-night call from the "worried well." As a result of all this listening, however, one fact about illness has come to impress me more than any other: The perceived meanings and emotions contained in these tales are utterly crucial to their outcomes.

My most intense exposure to the pervasive effects of machinelike metaphors for the body came in my first year of medical school while studying anatomy and physiology. Never were the endless metaphorical descriptions of the body acknowledged by professors actually to be metaphorical. Could they have assumed that we medical students would automatically know when metaphors — some of which we will examine — were being used? If so, they were wrong. My own hunch is that the professors were as gullible as we. Like us, they had become trapped by their metaphors

## The Antibiotic Paradox

*Coevolution works between opponents as well as between collaborators, and the discoverer of a new tool that affects other living things gains a short-term advantage, which won't last. The lifeforms being worked against, under strong selective pressure, become resistant, not just to the first new tool, but to the whole gamut of such tools.*

*And it happens amazingly fast. Fifty years ago, antibiotics were something between a novelty and a Godsend. Today they're our favorite medical tool, used eagerly and often — and resistance among bacteria has been selected for, improved, and spread all across the world.*

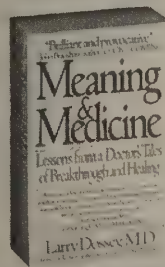
*Levy explains what's going on, warning of the possible end of the era of successful antibiotic treatment as the cost to us of developing new drugs exceeds what most people in the world can pay, while the earlier and cheaper drugs become unreliable due to overuse. He's warning against the free market. Wish him luck. —Hank Roberts*

Despite physicians' advice to the contrary, a person searching long enough will eventually find a physician who will prescribe an antibiotic, even when one is not indicated. Success in the search may be influenced by how well the patient knows the physician and the risk that denial of the drug might

lead to the physician's losing the patient. To some extent this casual attitude about antibiotics is due to ignorance on both sides, the consumer and the prescriber. The consumer, believing in the miracle drug, knows nothing about the potential harm in taking an antibiotic in a trivial fashion. The physician, worried about losing the patient, may rationalize that a bacterium may be involved but, if pushed, will probably admit that he or she thinks it is likely just a viral cold. Of course, there may also be a tiny minority of physicians who still believe in the powers of antibiotics in all instances.

A common example of a community-acquired resistant bacterial infection that has emerged under antibiotic selection is the gonococcus bacterium that causes the venereal disease gonorrhea. Previously, penicillin offered an easy cure, but the bacteria have now become resistant to this first-line antibiotic. As noted earlier, this emergence of resistance in a widespread infectious agent in the mid 1970s caused eyebrows to raise and previous doubters to take heed. Antibiotic resistance was not just limited to a few hospital strains or normal intestinal inhabitants. The initial appearance of resistance to penicillin in this microorganism was so new that it allowed the resistant forms to be traced to the brothels of Southeast Asia, one of the aftermaths of the Vietnam war. It was a common practice there for penicillin to be given to women on a regular basis to prevent venereal disease, thereby protecting their servicemen customers. While not proven, the likelihood is that the first resistant gonococcus appeared in Vietnam and was soon transported to Singapore, Europe, and the rest of the world. Today, every country in the world has to deal with this new resistant form of a bacterium which was previously susceptible to penicillin.

for the body that alienated us — and our patients — from a comprehensive, integrated view of person and body.

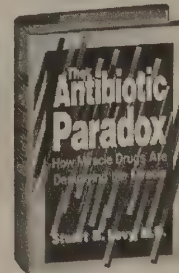


### Meaning and Medicine

(Lessons from a Doctor's Tales of Breakthrough and Healing)

Larry Dossey, M.D. Bantam Books, 1991; 290 pp. ISBN 0-553-37081-2

**\$12.50** (\$15 postpaid) from Bantam, Doubleday, Dell/Fulfillment Dept., 2451 S. Wolf Road, Des Plaines, IL 60018; 800/223-6834



### The Antibiotic Paradox

(How Miracle Drugs are Destroying the Miracle)

Stuart B. Levy, MD, 1992; 280 pp. ISBN 0-306-44331-7

**\$24.95** (\$26.95 postpaid) from Plenum Publishing Corp./Order Dept., 233 Spring Street, New York, NY 10013; 800/221-9369

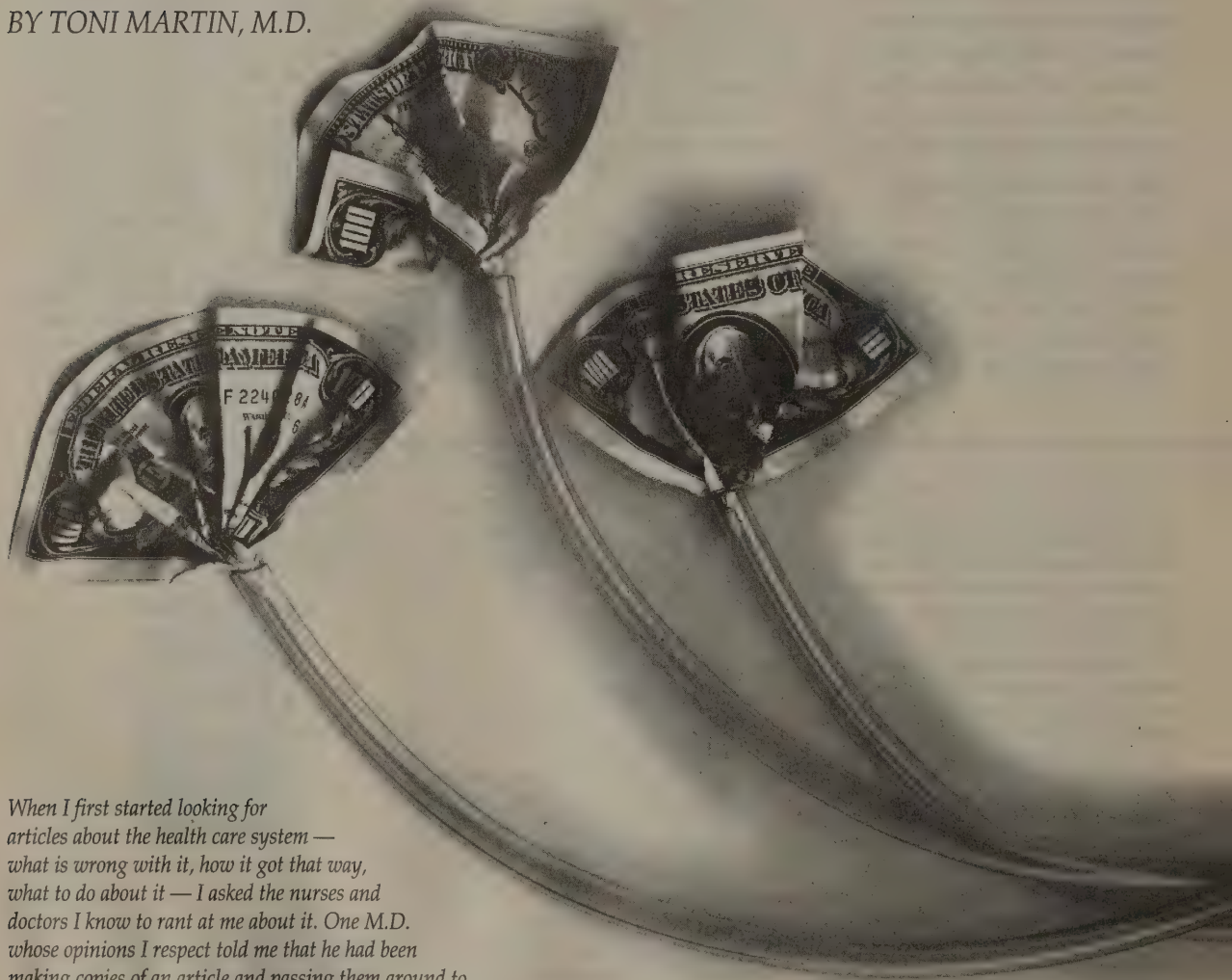
# High-Tech, High-Cost Health Care

BY TONI MARTIN, M.D.



THE NUMBER-ONE HEALTH CARE issue of the nineties is cost. The statistics are numbingly familiar: we spend almost 13 percent of the gross national product on health care, yet 37 million Americans have no health insurance.

Auto-industry economists estimate that employee health care adds about \$500 to the price of each new car. Twenty percent of every health care dollar goes to pay administrators rather than to provide care. A third of Americans surveyed last year said they had stayed at a job they did not like in order to retain health benefits. The situation has been defined as a crisis by business leaders, health professionals and politicians.



*When I first started looking for articles about the health care system — what is wrong with it, how it got that way, what to do about it — I asked the nurses and doctors I know to rant at me about it. One M.D. whose opinions I respect told me that he had been making copies of an article and passing them around to friends, which is how this piece by Toni Martin, M.D., first came to my attention. It was originally published in Express Vol. 14, No. 26: April 10, 1992. Dr. Martin, a general internist, practices in Oakland, California. She writes regularly about medical topics for Express (weekly; \$10/six months, \$20/year. P. O. Box 3198, Berkeley, CA 94703; 510/540-7400). —HLR*

We have as many different analyses of the problem as we have health policy experts; solutions are almost as numerous. One author points to unnecessary treatment, especially surgery, as the culprit. One blames big-ticket technology like magnetic resonance imaging; the next points to the cumulative cost of items like blood tests. Regina Herzlinger, a professor of business administration at Harvard, points the finger at lack of competition in the health care market and at consumers insulated by insurance from the true cost of their care. Doctors Stephanie Woolhandler and David Himmelstein, also at Harvard, have emphasized the overhead costs of multiple insurance bureaucracies: they favor a single-payer model like the Canadian National Health Insurance. Doctors Kevin Grumbach and Philip Lee, at the University of California/San Francisco, make a frightening case that the oversupply of physicians alone insures greater expenditure, since more physicians seem to generate more demand rather than competition, to the dismay of economists. I don't want to leave out greed, which motivates many doctors and hospitals. As

long as there are insurance companies willing to pay, there will be "entrepreneurial physicians" ready to soak them.

The situation reminds me of the three blind men describing an elephant.

The man who holds the tusk decides the creature has a hard shell. The one with his palm against the animal's flank recognizes a wrinkled wall. His friend at the tail imagines a hairy beast. They are all partly right, just as all of the above realities of health care delivery probably contribute to inflated health care costs. Yet as a practicing physician, I am wary of systemic analysis that ignores individual doctor-patient interaction.

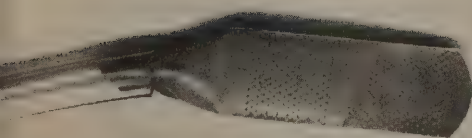
This one-on-one relationship, multiplied by millions, defines the practice of medicine, whether the care is delivered in a government-funded veterans' hospital, a health maintenance organization, or a private-practice suite. We know that exit polls do not necessarily reflect the vote cast in the voting booth; similarly, I have come to distrust the rhetoric of both consumers and providers outside the examination room. There is a psychiatric term, "folie a deux," which therapists borrow from the French to describe a delusion shared by two people. I am going to make a case that doctors and patients, responding to different pressures, unconsciously collude to increase medical costs. If I am right, it is going to take a revolution in attitudes, not just relocation of that exam room, to hold down the cost of medical care.

A few years ago, I performed a physical examination for a young man who wanted to register as a prospective parent at an adoption agency. He was in good health, a nonsmoker, with no familial risk factors for early coronary disease or cancer. I ran into him at a Christmas party at the home of a mutual friend several months later. He told me about a friend of his, same age, healthy, who went for a check-up in Los Angeles. The physician sent his friend for a treadmill test, a pulmo-

nary function test and a battery of laboratory tests, and charged his insurance five times my fee. I assumed my patient was sharing this story as an example of unnecessary testing and an exorbitant charge. Wrong. He was angry with me for not being as "thorough." "Look what he got that I didn't!" he sputtered.

While there are patients who refuse testing — especially the uninsured — by and large, people push for as many tests as as they can get. They wax poetic about the importance of the family doctor and holistic medicine until they develop a symptom, when they suddenly need exclusively specialist care. It is no secret that one of the major strategies employed by HMOs to control costs is "managed care," where the primary-care physician serves as a "gatekeeper" regarding referrals to specialists. There would be no need for such a role, if people behaved as rational consumers; they do not. Most of us, no matter how sophisticated and educated, panic in the face of illness and pain. We want the best — which we equate with the most costly, as though health care were a luxury item, like single-malt scotch or perfume.

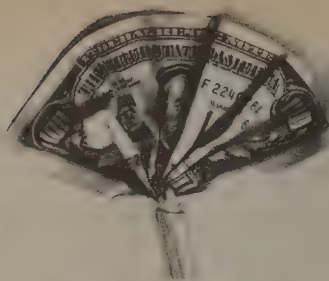
Every day I face patients with low back pain who demand x-rays of their lower back. I follow the recommendations outlined in the *New England Journal of Medicine*: "Spinal radiography is indicated only when the patient is over fifty years of age; when there is a history of serious trauma, known cancer, pain at rest, unexplained weight loss, drug or alcohol abuse, treatment with corticosteroids or temperature above 38 degrees C; or when the clinical history and examination raise a suspicion of ankylosing spondylitis or demonstrate a neuromotor deficit." Pretty specific; yet both the young laborer and the yuppie athlete insist they need x-rays at the first visit. Unfortunately, low back pain is one of many conditions where the specific cause of pain is frequently elusive, even after extensive testing, and is gen-



erally irrelevant to initial treatment. Muscle ache and slipped disc alike improve with rest, as psychologically unsatisfying as that may be. Many patients are unable to tolerate the idea that we go ahead and prescribe physical therapy and medication for a diagnosis as vague as "strain." They opt for a different belief system, such as chiropractic, where they get "answers." And x-rays.

Much of this push for greater expense is simply born of ignorance. Psychologist Neil Fiore, a cancer survivor, and author of *The Road Back to Health*, is a strong advocate for patients' rights — which he does not confuse with simply demanding "more." When his physicians tried to draw him into a folie a deux, he resisted, researching his case and ultimately setting limits on the treatment he received. "To increase your chances of getting good medical care, and more humane care, you need to put aside your unrealistic wishes for a miracle from modern medicine. As you open your eyes to the limits of medical science, and realistically appraise what it has to offer, you can more confidently take your proper role as an active member of the health care team."

Doctors, of course, are just as guilty of initiating unnecessary intervention. Inappropriate screening tests are a favorite, especially if the doctor owns a share in the laboratory or the radiology facility; recent legislation should curb this most blatant abuse. Another, subtler form of excess (which doctors insist is merely "defensive medicine") is the "round-up-the-usual-suspects" approach to diagnosis. Instead of "wasting time" listening to a patient with upper abdominal pain — and learning he smokes two packs a day and has a family history of ulcer disease — the physician wastes money ordering chemistry panels, and an ultrasound of the gallbladder in addition to x-rays of the stomach, to cover all bases. To be fair, many of us were



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taught that we needed to exclude all possible other diagnoses in order to settle on a plan of treatment, in the dark ages before 1980 when cost was unmentionable. "They'll never criticize you for doing too much," my residents confided when I was a student. "But you'll catch hell if you don't do enough."

Tests beget tests. I order a chest x-ray on a college student whose cough persists, to make sure there's no pneumonia, and I find an irregularity in the rib. "Consistent with congenital malformation or metastatic disease," reads the report. "Comparison with previous films advised." There is no hint of serious illness in this young woman, so I'm tempted to keep the information to myself, but fearful of missing something, I call her back for a complete physical. There are no previous chest x-rays except maybe when she was ten in Ohio, taken by a doctor whose name she's forgotten. We talk it over and she opts for a bone scan, because she's worried, and I can't blame

her. By now the cough is long gone, and several hundred dollars later, the bone scan is negative. *La folie a deux*. An editorial writer at the *New Yorker*, called back for a repeat mammogram, comments: "The upside of all the new medical equipment is that one sees more in a doctor's office now than fortune-tellers used to claim to see in tea leaves. The downside is that much of what there is to see is nuance and oblique — a shadow of a shadow of a shadow."

I have worked in health maintenance organizations and in private practice, and the pressure from patients for testing is the same, except that in the HMO setting the patient immediately assumes he can't have the brain scan for his headache because I'm trying to save money at the expense of his health. In private practice, the patient just thinks I'm crazy. "Why not, doc? My insurance will pay for it. Just to be sure."

I think there are several reasons people seek testing. We love technology. Just as we are always willing to buy new cars or television sets, we want the latest medical tests. We read about them in the popular press, where they are depicted as always reliable and risk-free. No one mentions that a scan is only as good as the technician who performs it and the physician who reads it. I remember when abdominal computerized tomography hit the scene in the late seventies. Suddenly we could "see" pancreatic tumors with an x-ray. I was involved in the care of a patient whose scan showed a mass in the pancreas, according to the radiologists — who, I realize in retrospect, were just learning to interpret the complex shadows. So the surgeons opened him up and explored his belly, but no mass, no tumor. He died of the complications of that surgery. Now, I am as intrigued by new technology as the next person. But I would not send every patient with a headache for a brain scan even if it were free.



Physicians and patients both tend to forget that a test's validity is dependent on the incidence of the problem in the population. For example, many men over age sixty in our society have coronary artery disease, so when a treadmill test is positive in that population, it is likely to be a true positive, not a mistake. On the other hand, a thirty-year-old woman without major risk factors (like diabetes or a family history of premature coronary disease) is statistically extremely unlikely to have heart problems. In fact, when researchers studied young women with positive stress tests, by injecting dye into the coronary arteries (angiography), almost all of them were free of coronary disease. The tests were falsely positive (like the abdominal CAT scan above). We can't tell a false positive from a true positive, so we pursue them all. More often than not the pursuit turns into a wild-goose chase, with significant morbidity and cost.

Another drive toward testing comes from patients' lack of faith in doctors and the increasing anonymity of the doctor-patient encounter. Now that patients are forced to change insurance with every new job, now that the average American moves every few years, now that primary-care physicians are moving in and out of group practices, now that patients are choosing to use urgent-care centers or drop-in clinics rather than waiting to see their own doctor, continuity of care is the exception rather than the rule. Patients see tests as a measure of the doctor's concern: if I don't test, I don't care. Clinical judgment, which doctors respect as the sine qua non of competence, has lost all meaning for patients. Anyone who watches "Donahue" knows that doctors are not trained in nutrition, geriatrics or any number of other subjects; in addition, we are unaware of epidemics of Lyme disease, giardiasis, chlamydia. . . . Conversely, if I've never met a patient before, I can't put a statement like "This is the worst pain I've ever had" in perspective, so I'd better



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check all the possibilities. That's one reason emergency room care is so expensive.

The subject of missed diagnoses leads to the next reason we are obsessed with tests: cancerphobia. Somewhere along the line, the cancer model — the hidden problem that is going to get out of control if not addressed immediately — was generalized to all of medicine. People come in on the first day of a cold because they want to "catch it early." "Catch what?" I am often tempted to ask. Norman Cousins states that "five basic misconceptions dominate and indeed disfigure much of the thinking about human health," and number two is "that illness proceeds in a straight line unless interrupted by outside intervention in one form or another." We would never have survived as a species if every insult to our bodies led to catastrophe. There is no substitute for our own immune system, supported by diet and rest. Somewhere this message has been lost, in the hype of

commercials for cold remedies and the frenetic pace of employment, where a week off for a sprain can put a worker's job in jeopardy.

Do doctors miss diagnoses? Yes. Are we afraid of missing diagnoses? Yes, particularly in today's malpractice climate. A few years ago I read a malpractice decision where the court found the physician liable for the patient's sudden death from a heart attack, despite the fact the patient had failed to schedule the stress test the physician recommended. The contention was that the physician should have realized the patient did not follow through and pursued him. Decisions that hold physicians to that level of responsibility force us to infantilize patients, to play "doctor knows best."

The threat of litigation poisons the doctor-patient relationship and drives up costs, but does little to discourage negligence. Jane Brody, a health writer for the *New York Times*, reported on a 1990 study of 31,000 patients hospitalized in New York State. "Only one suit was filed for every 9.6 cases of negligence determined by experts who reviewed the hospital records. And the vast majority of lawsuits were for cases in which the Harvard researchers concluded there had been no adverse event or no negligence." The crisis in liability insurance, which is much broader than just medicine, reflects a new attitude that the vicissitudes of life must be someone's fault and that society must foot the bill.

Today, the physician in private practice slips easily into a folie a deux with the patient — at least with those few patients who can afford fee-for-service insurance plans. In the managed-care realm, there are cost-control incentives, but the care cannot veer too far from the practice of medicine outside the walls, or next open-enrollment time patients will vote with their feet. Ethicist Daniel Callahan writes, "If it is necessary to control health care costs, and one is serious about that, then the clear

historical record shows that it is naive to believe it can be done wholly by self-restraint on the part of individuals and private institutions. While controls may not be against their long-term interests . . . controls will surely thwart their short-term desires and demands, which include seeking what they think they need in the ways they want to pursue it, a generalization as true about the patient seeking care as about the physician providing it."

Technology aside, what fuels the demand for health care? The economists point to demographics: the population is aging, there is more chronic illness as we grow older. Diabetes, hypertension, arthritis, coronary artery disease, cancer — the internist's bread and butter. The AIDS epidemic certainly adds to the bill. But we have also systematically enlarged the scope of health care. In the realm of prevention, Dr. Thomas Bodenheimer, writing in the *Western Journal of Medicine*, cites a 1989 estimate that "the total costs of implementing the National Cholesterol Education Program recommendations may come to \$10 to \$20 billion per year." Thousands of people pay out of pocket each year for cosmetic surgery. They choose to spend their disposable income on a facelift, instead of buying a car, shifting dollars into the health column again. Long-term psychotherapy and preventive bodywork are other examples of interventions that may enhance the quality of life but won't pay off in lower infant mortality.

Finally, as we have withdrawn social support from the poor, from children, from families, we are paying the price medically. Crack babies are one of the most glaring examples of this process. Instead of investing in schools and job training for teenagers, we let them drift until they are addicted and pregnant, then pay \$100,000 per child in the intensive-care nursery for their premature babies. Twenty years ago, after much



**More individual medical care can actually detract from the health of the community, if schools, housing and recreational facilities are sacrificed to fund the hospital.**

debate, the medical establishment re-defined alcoholism as a disease, not a social problem. Whatever the merits of that decision, the fact is that transferring alcoholism to the medical column didn't lower treatment costs. The abdication of parental responsibility sends the victims of child abuse and neglect into the medical system. Children raised on fast food, in front of the television, will cost more to treat as adults when their obesity catches up with them.

Doctors serve as truant officers for adults: when companies require a worksip for any absence longer than a day, they trigger thousands of patient visits. The workers' compensation system is reeling from an onslaught of stress claims because the battles of employee relations are now fought with psychiatrists and lawyers. We are reluctant to move against the tobacco companies, we veto helmet laws for motorcyclists, we don't want to force manufacturers to pay the true environmental costs of production. So we pay for lung cancer, trauma care and respiratory disease. Seeking to avoid social con-

### Patient Communication for First Responders . . .

Any one of us might find ourselves in the position of "first responder" — the person first on the scene at an accident or other trauma. What we know and do in those first minutes may make a crucial difference in the outcome. This book gives information that can help make that difference a positive one.

According to the author, the traumatized individual is essentially hypnotized through the impact of fear, and willingly receives whatever suggestions come to him or her. This is especially true if they come from an authority figure such as a medical professional or police officer. Jacobs argues that words, gestures, and actions may exert automatic psychophysiological effects. The art of effective communication with persons in trauma relates to using words and gestures that minimize negative stress and maximize healing processes.

Jacobs cites the work of Dr. M. Erik Wright, who in 1976 did an as-yet-

unreplicated study in which trauma patients received nurturing instructions and were removed from the presence of crowds and the drama of trauma scenes. They also heard no negative commentary from those who cared for them. This group more frequently arrived at the hospital alive, and healed faster, than those who received routine emergency care.

Designed as a manual for emergency personnel, *Patient Communication* addresses the crucial and complex issues of communication with the injured and traumatized. —Nola Lewis

• Of course, a great deal of tact and sensitivity must be used when being humorous at the emergency scene. If you are sincere and caring, however, any effort at humor will usually be helpful. If there is no positive response to your humor, ask the patient "Have you been under any emotional stress prior to the accident?" In many instances,

frontation, we incur hospital charges instead.

In his provocative book *The Betrayal of Health*, Dr. Joseph D. Beasley adds up the social costs we are avoiding as we pour money into health care. "Doctors and laypeople alike are becoming aware that spiraling health costs and stubbornly high levels of chronic illness will not change unless *people* change." More individual medical care can actually detract from the health of the community, if schools, housing and recreational facilities are sacrificed to fund the hospital. Patients seeking health in a doctor's office are like clients seeking love by frequenting a prostitute. Medical intervention for illness is a part of health, just as sex is a part of love. Yet in both cases, those who mistake the part for the whole will return home frustrated, no matter how competent the professional they visit or how much money they spend.

In the 1980s, economists tried to convince us that health care was a product like other products. The right combination of market forces and incentives would take care of the prob-

lem of increasing demand. Enoch Powell, former minister of health of Great Britain, told us: "There is virtually no limit to the amount of medical care an individual is capable of absorbing. . . . Not only is the range of treatable conditions huge and rapidly growing. . . there is the multiplier effect of successful medical treatment. Improvement in expectation of survival results in lives that demand further medical care."

I have a selfish motive for directing attention to the folie a deux. In these lean economic times, the gatekeeper role is evolving into that of a soldier at the barricades. If we proceed in the direction we've started, limiting this benefit and capping that payment, without addressing the concerns that fuel demand, the public will be increasingly frustrated. For lack of a handy insurance executive, people vent their spleen on their physicians. Practicing under these circumstances becomes more and more onerous. I never knew the good old days of docile patients and easy money: my colleagues who wax nostalgic about that situation remind me most of aging

colonists, wondering why the natives are restless. Yet I, too, worry about the increasingly adversarial nature of the doctor-patient relationship.

Some politicians frame the issues of increasing access to health care and reform of health care delivery separately, as though one will go away while we cope with the other. Granted, changing attitudes is tougher than shuffling bureaucracies, but it has been done. Environmentalists, aided by thoughtful media coverage, have altered public priorities over the past twenty years. Unfortunately, media coverage of health care has only whetted the public appetite for greater expenditure by trumpeting every new gimmick and highlighting appeals for experimental treatment. It is the success of innovation, not the failure, that keeps us clamoring for more. And who are the environmentalists of medicine, disembodied citizens seeking to preserve what's left of a balanced approach to health? They don't exist, since we are all potentially partners in the folie a deux, with our own health care on the line. ☺

an injury or an accident causes a person to focus on other negative stresses in their life until these cannot be separated from the accident. When you ask this question, the patient has the opportunity to make the separation and thus get on with the process of survival.

David Cheek asked this question to a patient brought into the emergency room when he was on duty. The patient was a forty-two-year-old unmarried woman who had been found unconscious on her living room floor in a pool of blood. When she arrived at the hospital, she appeared to be unconscious, and her skin was cold and mottled on appearance. Her respiration was shallow and rapid; her pulse rate was 140.

Dr. Cheek leaned over to her and asked, "Have you been under any emotional stress lately?" This was the first remark anyone had said to her. She opened her eyes and answered, "Oh, I'm so ashamed. I've been going with my friend now for two years, and I had intercourse with him last night." Dr. Cheek laughed and said, "For goodness

sake, why did you wait so long?" At this point, color returned to the woman's cheeks, she smiled and asked Dr. Cheek not to tell her roommate, and her pulse dropped to 100.

■ Phrase your statements in the positive. Words like *not* or *won't* do not form images in the mind; therefore, images are produced by the object of the sentence that uses them. Directives that contain negations should therefore always be rephrased.

Wrong way: You're not dizzy any more.

Right way: You're feeling clear-headed.

Wrong way: In a few moments you won't feel like crying.

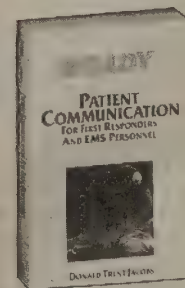
Right way: In a few moments you will feel more relieved.

Wrong way: Don't breathe so fast.

Right way: Breathe slower.

Wrong way: You are not going to die.

Right way: You are going to live.



**Patient Communication  
for First Responders  
and EMS Personnel**  
(The First Hour of Trauma)

Donald Jacobs, 1991; 178 pp.  
ISBN 0-89303-732-X

**\$23** (\$27.50 postpaid) from Prentice  
Hall Press/Order Processing Center,  
P. O. Box 11071, Des Moines, IA  
50336-1071; 515/284-6751

## Before You Call the Doctor

This book would have served the reader better if it had been divided in two. Part One, "Before You Call the Doctor," could list those symptoms for which self-care is effective. Part Two, which could be called "Call the Doctor Now," should encompass the symptoms for which the authors recommend professional help. I would also like to have seen more suggestions for safe nutrient supplementation for the relief of certain symptoms in lieu of the recommended over-the-counter drugs. The research literature is saturated with such information.

However, the book does have great value as a compendium of symptoms. The explanations of possible causes for common conditions are excellent, as are many of the suggestions. Occasionally, a recommendation is unrealistic: "Stop smoking if you've lost your sense of taste": "Cut down on salt": "Cut down on fat." (These last are useless statements without identification of the hidden salt and/or fat so prevalent in processed and restaurant foods. And it's not that easy to come by salt- and fat-free diets!)

Despite these objections, there's enough helpful information to warrant adding this book to your collection of self-care or health manuals. —Betty Kamen

### ■ Tics and Twitches

Tics and twitches are brief, rapid, involuntary, nonrhythmic winking movements of the eyelids, facial muscles, hands, shoulders, legs, or other areas.

**What's Going On?** Most people experience occasional, temporary tics and twitches such as eyelid flutter, particularly when stressed or fatigued. Tics that last a month or two often occur in childhood or early adolescence, especially among boys. They typically include movements such as eye blinking, facial grimacing, and head turning. Often a child's tics or twitches begin after a particularly stressful event and become more pronounced and frequent or develop into other movements during times of stress.

**Before You Call the Doctor.** Most tics usually last only a few weeks and disappear without treatment. Even chronic childhood tics usually disappear during adolescence. Doctors usually take a wait-and-see attitude, and you can do this before you call the doctor. Because stress and muscle tension are usually important factors in tics and twitches, stress reduction and tension relief often help. Try deep breathing, hot baths, massage, or anything else that helps you relax (see *Manage Your Stress Load* in Chapter 1).

Parents concerned about children's tics and twitches should never embarrass or punish them. Instead, experts recommend ignoring the tic/twitch and helping the child learn to manage his or her stress through deep breathing, exercise, emotional support, and creative play.

**When to Call the Doctor.** If a tic or twitch lasts more than a month, or if it becomes so annoying that it interferes with sleep or other activities, consult a physician. A muscle relaxant may be prescribed.

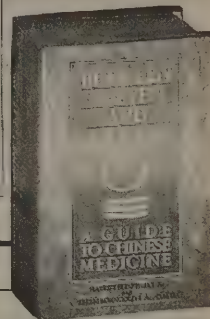
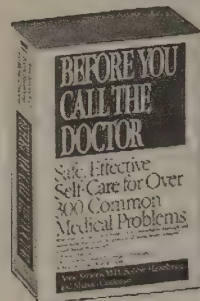
In rare cases, tics may indicate Tourette's syndrome, a disorder which causes severe chronic tics and the utterance of involuntary sounds. Tourette's can be treated with a variety of medications.

Other rare but serious causes of persistent twitches are seizures and certain hereditary nerve disorders.

## Before You Call the Doctor

(Safe, Effective Self-Care for Over 300 Common Medical Problems)

Anne Simons, Bobbie Hasselbring, and Michael Castleman. Fawcett Columbine Books, 1993; 688 pp. ISBN 0-449-90493-8  
**\$15** (\$17 postpaid) from Random House Inc./Order Dept., 400 Hahn Road, Westminster, MD 21157; 800/733-3000



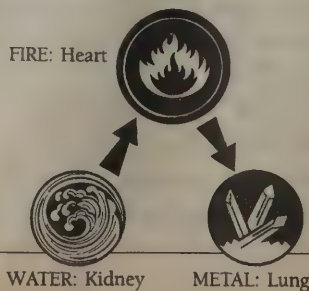
## Between Heaven and Earth

This book acquaints Westerners with enough Chinese medicine to understand and develop the relationship between their mental, physical, and emotional states. The authors have done a tremendous job, painstakingly explaining the principles and ideas upon which Chinese medicine operates.

**Short on Taoism** (from which all Chinese medicine springs) and long and lucid on what the medicine is and how it works, the book articulately demonstrates that the interconnection of mankind, nature, and the cosmos is at the very heart and soul of Chinese medicine. **Between Heaven and Earth** demystifies the foreignness for the Westerner by presenting graphs, tables, and charts that are easy to comprehend.

The information ranges from basic conceptual definitions to complex methods of diagnosis. This is an excellent resource guide for the layperson; for the health practitioner, it is as invaluable as *Gray's Anatomy*. —Cindy Cosgrove

**For the Fire type, the key relationships are between the Heart and Lung (Fire restrains Metal) and between the Heart and Kidney (Water inhibits Fire).**



## Between Heaven and Earth

(A Guide to Chinese Medicine)

Harriet Beinfield and Efreim Korngold. Ballantine Books, 1991; 432 pp. ISBN 0-345-37974-8

**\$12** (\$14 postpaid) from Random House Inc./Order Dept., 400 Hahn Road, Westminster, MD 21157; 800/733-3000

■ Since everything is connected by the circle, health is understood broadly, defining the whole being within the social and natural order. What is good for nature is good for humanity, what is good for one is good for the body, and so on. To harm a part is to harm the whole. What is bad for the heart is bad for the body, what damages one person damages all people, what injures the earth injures me. Conversely, to restore and preserve the good health of one body and mind is to foster the well-being of the whole, the earth and all life upon it.

■ Before we are born our parents endow us with *Essence Qi*, which following birth is fortified by *Air Qi* from the *Lungs* and *Food Qi* from the *Spleen*. Both inherited and acquired *Qi* is collected within the reservoir of the *Kidney* to be dispensed as needed. To say the *Kidney* holds the *Essence* means it generates and warehouses the original material substance that forms the basis of all other tissues — it grasps the kernel from which all life springs. *Kidney Essence* can be likened to the genetic information encoded in *DNA*, the template of biological destiny, which along with basic structural proteins forms hormones and enzymes that direct cellular metabolism.

## Chinese Medicinal Herbs

So you come home from your Chinese acupuncturist with your bag of herbs that do wonders for your ailments (really). But you don't know what that colorful bunch of twigs and bark is. With 400 color photographs, this beautifully illustrated dictionary gives you the herbs' names, properties, and uses, as well as showing each herb and its parent plant. A great book for the curious, the botanically inclined, and the practitioner.

—Susan Erkel Ryan



### An Illustrated Dictionary of Chinese Medicinal Herbs

Wee Yeow Chin and Hsuan Keng, 1992; 184 pp. ISBN 0-916360-53-9

**\$32.95** (\$35.20 postpaid) from CRCs Publications, P. O. Box 1460, Sebastopol, CA 95473; 707/829-0735



### IXORA

**FAMILY: Rubiaceae**  
*Ixora chinensis* 龙船花  
Chinese ixora

The name ixora comes from a Malabar deity. These are evergreen shrubs or small trees of the tropics. There are many attractive wild species that have yet to be brought into cultivation. Those that are in

cultivation are handsome plants, as their flowers are brightly coloured and their foliage attractive. This plant is native to southern China and Peninsular Malaysia, bearing dense clusters of yellow flowers which turn orange-red with age.

Parts used:

*whole plant:* treats rheumatism, abscesses, bruises; relieves pain

## The Embodied Mind

What am I that I am? Or am I at all? Very few cognitive scientists would be so bold as to approach such profound questions. Most will stop far short: how does memory, or speech, or vision work?

But what is the self — or is there a self at all? These are far more difficult to get hold of and so most often ignored. Yet this is the most important question of human existence. What does it mean to be conscious and human? Are we merely meat machines? Or is there more going on here? Varela and co-authors venture to take on these, the hardest of questions.

They begin with a helpful and comprehensive review of the history of ideas of mind in the cognitive sciences, artificial intelligence, psychology and philosophy. Critical in their review is their explicit theory of the evolution of ideas from relatively primitive cognitivism, to theories of emergence to their enactive paradigm. Undoubtedly many in the disciplines noted would not accept the author's map — but I do, and find it insightful and revealing.

But the book's truly original element begins when the authors weave together the leading edges of modern science with the richly developed catalog of human inner experience documented by the Tibetan Buddhists. There they find rigorous and precisely structured support for their view that there is no singular locus of the self.

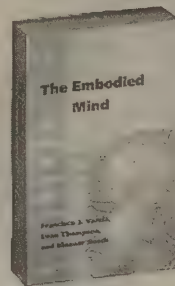
Tibetan Buddhism has a long history of systematic, carefully documented study of human experience. The Tibetans have developed a sense of mind that is founded not on biology, but on introspection, reflection, description and documentation. The authors are intimately familiar with that body of literature, and use it to demonstrate not only its rigor, but its applicability to contemporary issues in cognitive science.

—Peter Schwartz

■ Considerable evidence gathered in many contexts throughout human history indicates both that experience itself can be examined in a disciplined manner and that skill in such an examination can be considerably refined over time. We refer to the experience accumulated in a tradition that is not familiar to most Westerners but that the West can hardly continue to ignore — the Buddhist tradition of meditative practice and pragmatic, philosophical exploration. Though considerably less familiar than other pragmatic investigations of human experience, such as psychoanalysis, the Buddhist tradition is especially relevant to our concerns, for, as we shall see, the concept of a nonunified or decentered (the usual terms are *egoless* or *selfless*) cognitive being is the cornerstone of the entire Buddhist tradition. Furthermore, this concept — although it certainly entered into philosophical debate in the Buddhist tradition — is fundamentally a firsthand experiential account by those who attain a degree of mindfulness of their experience

in daily life. For these reasons, then, we propose to build a bridge between mind in science and mind in experience by articulating a dialogue between these two traditions of Western cognitive science and Buddhist meditative psychology.

Let us emphasize that the overriding aim of our book is pragmatic. We do not intend to build some grand, unified theory, either scientific or philosophical, of the mind-body relation. Nor do we intend to write a treatise of comparative scholarship. Our concern is to open a space of possibilities in which the circulation between cognitive science and human experience can be fully appreciated and to foster the transformative possibilities of human experience in a scientific culture.



### The Embodied Mind

(Cognitive Science and Human Experience)

Francisco J. Varela, Evan Thompson, and Eleanor Rosch, 1991; 328 pp. ISBN 0-262-72021-3

**\$13.95** (\$16.95 postpaid) from The MIT Press/Order Dept., 55 Hayward Street, Cambridge, MA 02142; 800/356-0343

The following article gave me the answer to a question I had always wanted to know: what, exactly, is an MRI scan? Nominally about medical technology, this piece takes a detour through the Bruce Sterling dimension, so the bare facts are the least of what you'll get out of reading it.

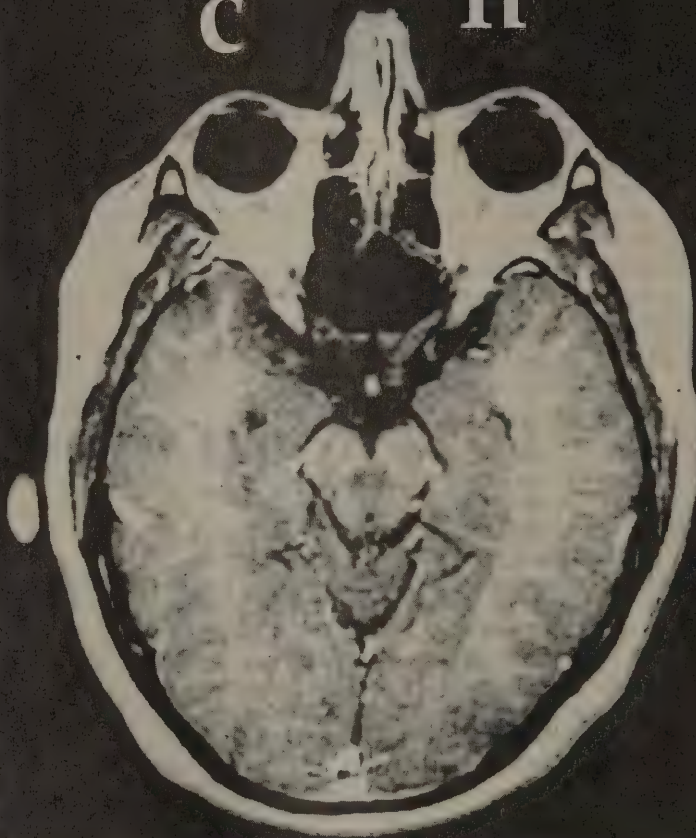
The agenda is always less predictable when Sterling is around. At the Computers, Freedom, and Privacy conference, an annual gathering of law-enforcement officials (overt and covert) and hackers (overt and covert), he turned in a legendary performance as a hypothetical "malicious hacker." Sterling showed up at a recent congressional hearing about the future of the National Research and Education Network legislation and presented his testimony in the form of a pointed science-fiction tale — the memoirs of an "NREN sysop," written sometime in the next century.

Sterling likes to give away electronic versions of good stuff he's written, after his paper publishers have had their way with it. The original version of "Magnetic Vision" was published in *The Magazine of Fantasy and Science Fiction* (P. O. Box 56, Cornwall, CT 06753; \$26/year US, \$31/year elsewhere), where Sterling writes a monthly column.  
—HLR



BY BRUCE STERLING

# M a g n e t i c V i s i o n



HERE ON MY DESK I HAVE SOMETHING that can only be described as miraculous. It's a big cardboard envelope with nine thick sheets of black plastic inside, and on these sheets are pictures of my own brain.

These images are "MRI scans" — magnetic resonance imagery from a medical scanner.

These are magnetic windows into the lightless realm inside my skull. The meat, bone, and various gristles within my head glow gently in crisp black-and-white detail. There's little of the foggy ghostliness one sees with, say, dental x-rays. Held up against a bright light, or placed on a diagnostic light table, the dark plastic sheets reveal veins, arteries, various odd fluid-stuffed ventricles, and the spongy wrinkles of my cerebellum. In various shots, I can see the pulp within my own teeth, the roots of my tongue, the bony caverns of my sinuses, and the nicely spherical jellies that are my two eyeballs. I can see that the human brain really does come in two lobes and in three sections, and that it has gray matter and white matter. The brain is a big whopping gland, basically, and it fills my skull just like the meat of a walnut.

It's an odd experience to look long and hard at one's own brain. Though it's quite a privilege to witness this, it's also a form of narcissism without much historical parallel. Until I saw these images, I never truly comprehended my brain as a tangible physical organ, like a knuckle or a kneecap. And yet here is the evidence, laid out irrefutably before me, pixel by monochrome pixel, in a large variety of angles and in exquisite detail. And I'm told that my brain is quite healthy and perfectly normal — anatomically, at least.

The discovery of x-rays in 1895, by Wilhelm Roentgen, led to the first technology that made human flesh transparent. Nowadays, x-rays can pierce the body through many different angles to produce a graphic three-dimensional image. This 3-D technique, Computerized Axial Tomography (the CATscan) won a Nobel Prize in 1979 for its originators, Godfrey Hounsfield and Allan Cormack.

Sonography uses ultrasound to study human tissue through its reflection of high-frequency vibration: sonography is a sonic window.

Magnetic resonance imaging, however, is a more sophisticated window yet. It is rivaled only by the lesser-known and still rather experimental PETscan, or Positron Emission Tomography. PETscanning requires an injection of radioactive isotopes into the body so that their decay can be tracked within human tissues. Magnetic resonance, though it is sometimes known as Nuclear Magnetic Resonance, does not involve radioactivity.

The phenomenon of nuclear magnetic resonance was discovered in 1946 by Edward Purcell of Harvard and Felix Block of Stanford. Purcell and Block were working separately, but published their findings within a month of one another. In 1952, Purcell and Block won a joint Nobel Prize for their discovery.

If an atom has an odd number of protons and neutrons, it will have what is known as a "magnetic moment": it will spin, and its axis will tilt in a certain direction. When that tilted nucleus is put into a magnetic field, the axis of the tilt will change, and the nucleus will also wobble at a certain speed. If radio waves are then beamed at the wobbling nucleus at just the proper wavelength, they will cause the wobbling to intensify — this is the "magnetic resonance" phenomenon. The resonant frequency is known as the Larmor frequency, and the Larmor frequencies vary for different atoms.

Hydrogen, for instance, has a Larmor frequency of 42.58 megahertz. Hydrogen, which is a major constituent of water and of carbohydrates such as fat, is very common in the human body. If radio waves at this Larmor frequency are beamed into magnetized hydrogen atoms, the hydrogen nuclei will absorb the resonant energy until they reach a state of excitation. When the beam goes off, the hydrogen nuclei will relax again, each nucleus emitting a tiny burst of radio energy as it returns to its original state. The nuclei will also relax at slightly different rates, de-

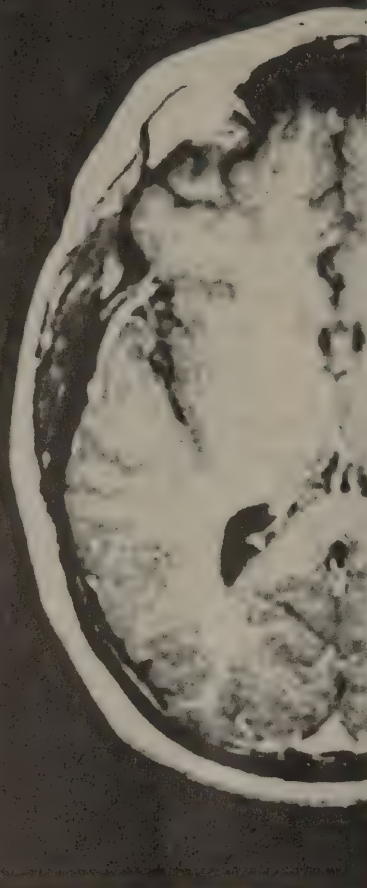
pending on the chemical circumstances around the hydrogen atom. Hydrogen behaves differently in different kinds of human tissue. Those relaxation bursts can be detected, and timed, and mapped.

The enormously powerful magnetic field within an MRI machine can permeate the human body; but the resonant Larmor frequency is beamed through the body in thin, precise slices. The resulting images are neat cross sections through the body. Unlike x-rays, magnetic resonance doesn't ionize and possibly damage human cells. Instead, it gently coaxes information from many different types of tissue, causing them to emit tell-tale signals about their chemical makeup. Blood, fat, bones, tendons, all emit their own characteristics, which a computer then reassembles as a graphic image on a computer screen, or prints out on emulsion-coated plastic sheets.

An x-ray is a marvelous technology, and a CATscan more marvelous yet. But an x-ray does have limits. Bones cast shadows in x-radiation, making certain body areas opaque or difficult to read. And x-ray images are rather stark and anatomical; an x-ray image cannot even show if the patient is alive or dead. An MRI scan, on the other hand, will reveal a great deal about the composition and the health of living tissue. For instance, tumor cells handle their fluids differently than normal tissue, giving rise to a slightly different set of signals. The MRI machine itself was originally invented as a cancer detector.

After the 1946 discovery of magnetic resonance, MRI techniques were used for thirty years to study small chemical samples. However, a cancer researcher, Dr. Raymond Damadian, was the first to build an MRI machine large enough and sophisticated enough to scan an entire human body, and then to produce images from that scan. Many scientists, most of them even, believed and said that such a technology was decades away, or even technically impossible.

# Left Brain



Damadian had a tough, prolonged struggle to find funding for his visionary technique, and he was often dismissed as a zealot, a crackpot, or worse. Damadian's struggle and eventual triumph is entertainingly detailed in his 1985 biography, *A Machine Called Indomitable*.\*

Damadian was not much helped by a bitter and public rivalry with his foremost competitor in the field, Paul Lauterbur. Lauterbur, an industrial chemist, was the first to produce an actual magnetic-resonance image, in 1973. But Damadian was the more technologically ambitious of the two. His machine, *Indomitable* (now in the Smithsonian Museum), produced

\* Random House, 1985; out of print.

the first scan of a human torso, in 1977. Once this proof-of-concept had been thrust before a doubting world, Damadian founded a production company, and became the father of the MRI scanner industry.

By the end of the 1980s, medical MRI scanning had become a major enterprise, and Damadian had won the National Medal of Technology, along with many other honors. As MRI machines spread worldwide, the market for CATscanning began to slump in comparison. Today, MRI is a two-billion-dollar industry, and Dr. Damadian and his company, Fonar Corporation, have reaped the fruits of success. (Some of those fruits are less sweet than others: today Damadian and Fonar Corp. are suing Hitachi and General Electric in federal court, for alleged infringement of Damadian's patents.)

The magnetic fields emitted by MRIs are extremely strong, strong enough to tug wheelchairs across the hospital floor, to wipe the data off the magnetic strips in credit cards, and to whip a wrench or screwdriver out of one's grasp and send it hurtling across the room. If the patient has any metal imbedded in his skin — welders and machinists, in particular, often do have tiny painless particles of shrapnel in them — then these bits of metal will be wrenched out of the patient's flesh, producing a sharp bee-sting sensation. And in the invisible grip of giant magnets, heart pacemakers can simply stop.

MRI machines can weigh ten, twenty, even one hundred tons. And they're big — the scanning cavity, in which the patient is inserted, is about the size and shape of a sewer pipe, but the huge plastic hull surrounding that cavity is taller than a man and longer than a plush limo. A machine of that enormous size and weight cannot be moved through hospital doors; instead, it has to be delivered by crane, and its shelter constructed around it. The shelter must not have any iron construction rods in it or beneath its floor, for obvious reasons.

And yet that floor had better be very solid indeed.

Superconductive MRIs present unique hazards. The superconductive coils are supercooled with liquid helium. Unfortunately there's an odd phenomenon, known as "quenching," in which a superconductive magnet, for reasons rather poorly understood, will suddenly become merely conductive. When a "quench" occurs, an enormous amount of electrical energy suddenly flashes into heat, which makes the liquid helium boil violently. The MRI's technicians might be smothered or frozen by boiling helium, so it has to be vented out the roof, requiring the installation of specialized vent-stacks. Helium leaks, too, so it must be resupplied frequently, at considerable expense.

The MRI complex also requires expensive graphic-processing computers, CRT screens, and photographic hard-copy devices. Some scanners feature elaborate telecommunications equipment. Like the giant scanners themselves, all these associated machines require power-surge protectors, line conditioners, and backup power supplies. Fluorescent lights, which produce radio-frequency noise pollution, are forbidden around MRIs. MRIs are also very bothered by passing CB radios, paging systems, and ambulance transmissions. It is generally considered a good idea to sheathe the entire MRI cubicle (especially the doors, windows, electrical wiring, and plumbing) in expensive, well-grounded sheet copper.

Despite these drawbacks, the United States today rejoices in possession of some two thousand MRI machines. (There are hundreds in other countries as well.) The cheaper models cost a solid million dollars each; the top-of-the-line models, two million. Five million MRI scans were performed in the United States last year, at prices ranging from \$600 to twice that price and more. In other words, in 1991 alone, Americans sank some five billion dollars in health care costs



into the miraculous MRI technology.

Today America's hospitals and diagnostic clinics are in an MRI arms race. Manufacturers constantly push new and improved machines into the market, and other hospitals feel a dire need to stay with the state-of-the-art. They have little choice in any case, for the balky, temperamental MRI scanners wear out in six years or less, even with the best of care.

Patients have little reason to refuse an MRI test, since insurance will generally cover the cost. MRIs are especially good for testing for neurological conditions, and since a lot of complaints, even quite minor ones, might conceivably be neurological, a great many MRI scans are performed. The tests aren't painful, and they're not considered risky. Having one's tissues briefly magnetized is considered far less risky than the fairly gross ionization damage caused by x-rays. The most common form of MRI discomfort is simple claustrophobia. MRIs are as narrow as the grave, and also very loud, with sharp mechanical clacking and buzzing.

But the results are marvels to behold, and MRIs have clearly saved many lives. And the tests will eliminate some potential risks to the patient, and put the physician on surer ground with his diagnosis. So why not just go ahead and take the test?

MRIs have gone ahead boldly. Unfortunately, miracles rarely come cheap. Today the United States spends 13 percent of its GNP on health care, and health-insurance costs are drastically outstripping the rate of inflation.

High-tech, high-cost resources such as MRIs generally go to the well-to-do and the well-insured. This practice has sad repercussions. While some lives are saved by technological miracles — and this is a fine thing — other lives are lost, that might have been rescued by fairly cheap and common public-health measures, such as better nutrition, better sanitation, better prenatal care. As ad-

vanced nations go, the United States has a rather low general life expectancy, and quite a bad infant death rate.

MRI may be a true example of a technology genuinely ahead of its time. It may be that the genius, grit, and determination of Raymond Damadian brought into the 1980s a machine that might have been better suited to the technical milieu of the 2010s. What MRI really requires for everyday workability is some cheap, simple, durable, powerful superconductors. Those are simply not available today, though they would seem to be just over the technological horizon. In the meantime, we have built thousands of magnetic windows into the body that will do more or less what CATscan x-rays can do already. And though they do it better, more safely, and more gently than x-rays can, they also do it at a vastly higher price.

Damadian himself envisioned MRIs as a cheap mass-produced technology. "In ten to fifteen years," he is quoted as saying in 1985, "we'll be able to step into a booth — they'll be in shopping malls or department stores — put a quarter in it, and in a minute it'll say you need some Vitamin A, you have some bone disease over here, your blood pressure is a touch high, and keep a watch on that cholesterol." A thorough medical checkup for twenty-five cents in 1995! If one needed proof that Raymond Damadian was a true visionary, one could find it here.

Damadian even envisioned a truly advanced MRI machine capable of not only detecting cancer, but of killing cancerous cells outright. These machines would excite not hydrogen atoms, but phosphorus atoms, common in cancer-damaged DNA. Damadian speculated that certain Larmor frequencies in phosphorus might be specific to cancerous tissue; if that were the case, then it might be possible to pump enough energy into those phosphorus nuclei so that they actually shivered loose from the cancer cell's DNA, destroying the cancer

cell's ability to function, and eventually killing it.

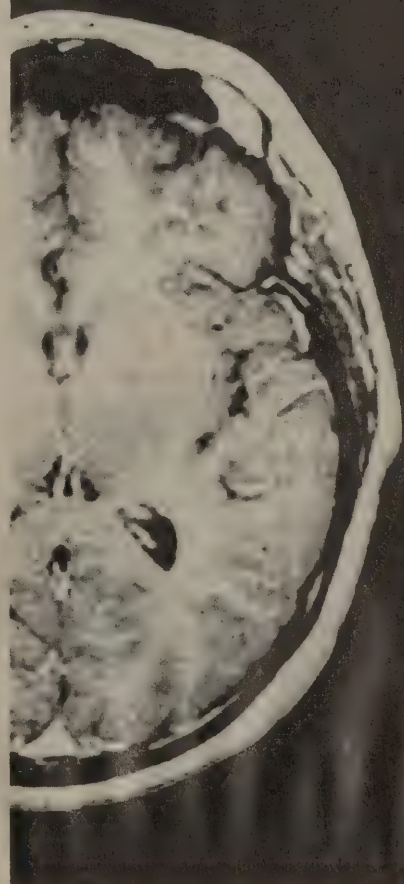
That's an amazing thought — a science-fictional vision right out of the Gernsback Continuum. Step inside the booth, drop a quarter, and have your incipient cancer not only diagnosed, but painlessly obliterated by invisible Magnetic Healing Rays.

Who the heck could believe a visionary scenario like that?

Some things are unbelievable until you see them with your own eyes. Until the vision is sitting right there in front of you. Where it can no longer be denied that it's possible.

A vision like the inside of your own brain, for instance. ☛

All scans are of Bruce Sterling's brain.



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## Wrestling with the Angel

Max Lerner's book tells the story of a three-year period in which he overcame two different cancers — plus a heart attack.

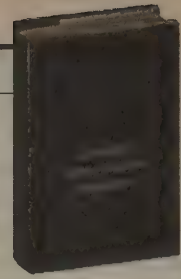
Defying the virtual death sentence he received from his doctors, Lerner refused to give up. One can't help feeling that he stayed alive because he refused to let either his illness or his physicians panic him into the usual wild swings of depression and despair that too frequently follow a serious diagnosis.

Lerner understood that the customary patient role — in which one is expected to surrender his selfhood to the rules and routines of the medical center — can be the enemy of healing. And he gracefully but steadfastly rejected it. He reviewed the treatments his doctors suggested, accepting some but refusing others: he decided to undergo a series

of chemotherapy treatments for his lymphoma (it helped). But he refused the "standard treatment" for his prostate cancer (chemical or surgical castration) and through his own efforts became one of the first US patients to receive an experimental, ultimately effective hormonal treatment.

Because he insisted on directing his own medical drama, Lerner was able to blend his personal, attitudinal, and lifestyle approaches with the medical treatments he had selected. The result: a personalized yet technically superb level of care that was far superior to what he would have received had he either accepted his doctor's advice uncritically or rejected it altogether.

Since the seventies, we have seen the birth of a kind of book in which the author goes public about his or her experi-



## Wrestling with the Angel

Max Lerner, 1990; 210 pp.  
ISBN 0-393-02846-1

**\$18.95** postpaid from W. W. Norton & Co./Order Dept., 800 Keystone Industrial Park, Scranton, PA 18512; 800/233-4830

ence of illness — to the benefit of both writer and reader. Lerner's book is a valuable contribution to this new and honorable tradition.

—Tom Ferguson, M.D.

● I pressed him again: How bad? Finally I got out of him the harsh truth, this time the unvarnished "news." "I should guess," he said as kindly as he could, "that you don't have much more than six months." In the cab home Jenny and I sat very close.

It was a turning point for me. I had been a man of words, accustomed to orient myself in terms of the territory of ideas. But here I was, alone with my cancer, ignorant of its grammar, syntax, and vocabulary, of its chemistry and biology, of the dynamics of its growth and treatment, of the physics of its acceleration and the statistics of my mortality. I had to rely on the experts who understood these things. But after the reeling news I decided to fight back, if only to show that, however ravaged by the dividing cell, I was not a statistic but a sovereign person.

● I was holding conversations with myself as well about this critical organ, the heart, which had sent me an unexpected message to take better notice of it. On the spleen and prostate, both tumor-ridden, my doctors' verdict had been one of a dispensable nuisance, and I came to agree on both scores, adjective and noun together. My heart was different. Central to my being, I couldn't live without it. Nor had it done anything to offend me. I had offended it by getting one of my arteries so clogged that the heart couldn't pump enough blood through it without overtaxing and damaging itself. The heart is a good logistical citizen in the polity of the organism, pumping, carrying, delivering our lifeblood — a vital messenger (the Greeks thought) whom the gods provided for us, like their own Hermes. Like Hermes also, deservedly or not, the heart acquired the reputation of being wily and secretive, in fact, something of a thief, going on marauding expeditions, stealing other hearts.

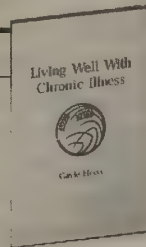
## Living Well with Chronic Illness

What is it like to discover that you have a serious illness? This brief, plainspoken pamphlet touches all the bases. You go through despair and hope, sadness and denial, closing off and reaching out. And many of these feelings are simultaneous. Gayle Heiss, a Mendocino, California, illness counselor, has Sjogren's Syndrome. She knows whereof she speaks.

This pamphlet is essential reading for those with a chronic or catastrophic illness. Equally valuable for friends and family. Quantity discounts available — health professionals, please take note.  
—Tom Ferguson, M.D.

● Very often, the initial response to the early stages of an illness is to continue all the usual roles, working just as hard, if not harder. That was my own response. My job being one requiring a great deal of responsibility and energy, I decided to increase the hours. How ironic to respond to a body that is already strained and hurting by pushing it harder! Since I felt my body had betrayed me by breaking down, perhaps I paid it back in kind. Obviously, such an attitude and response involves viewing the body as separate from the self. We are, of course, much more than our bodies, but it is the current container and we need it for as long as we are here. We should be kind and gentle to it.

I always loved my work and continued to love the idea of doing that work, but refused to acknowledge that it was no longer



## Living Well with Chronic Illness

Gayle Heiss, 1988; 16 pp.  
ISBN 0-936609-10-9

**\$2** (\$2.60 postpaid) from Gayle Heiss, P. O. Box 210, Mendocino, CA 95460

a positive experience because physical limitations were getting in the way. I simply didn't feel well enough, enough of the time, to do it with ease or to meet my own standards. It left me feeling defeated and too drained to do anything else I enjoy.

When I could no longer continue, I gave up my job and entered what seems to be a necessary "transitional" stage, where previous roles and, to some extent, sources of self-esteem are not yet replaced by new ones.

● If the only acceptable evidence of being healed is a symptom-free body, one's sense of being a whole, healthy person will never be secure. If we live our lives as if we'll live forever, then no matter when illness or death approaches, we'll be caught up short. Indeed, the only thing we can count on for sure is our own mortality. That has to be okay with us. Our sense of self, our goals and values, have to allow for it.

## The Alchemy of Illness

Intense experiences of any sort retract consciousness: they shrink the human attention span in a way that frequently persuades the individual to mistake the universe and all its variables for the inside of one of those miniature-snow-storm paperweights. Here, Kat Duff demonstrates that this is no less true for sickness than for love or meditation or LSD or the relentless pursuit of fraudulent junk bonds: the details of the entrapping minutiae become a world complete unto itself. The important thing to remember is that this altered state is not a transformation, as such: what goes down must come back up, and inevitably the world expands, attention returns upward once more, and the real world is re-entered.

Duff culls mythological references from many cultures to describe the inward journey catalyzed by serious illness. To her, illness is the actualization of the metaphoric rites of initiation observed in so many traditional cultures. Duff explores these underworld journeys with examples from her own experiences and dreams, as well as with examples from literature and from Buddhist, West African and native American folklore. While interesting, these analyses have something of the unwholesome obsessive miasma of the sickroom clinging to them. They are unsettling; I kept wanting to close the book and go out into the bright day where I could hear birds singing. In the end, alchemy is not a word that lends itself to the description of illness. Optimally, one is not transformed by an illness: one is healed of it.  
—Patrizia DiLucchio

The interiority of illness makes its own compelling sounds — a steady humming, thick silence, or terrible ringing — that drown out the common engaging noises of life, the kitchen conversations and crying children. There have been many times when I have found it nearly impossible to focus my attention on anything outside of myself, because I was so preoccupied with my own discomfort: a swirling dizziness, haunting memory, or approaching panic. The life/death struggle that is illness is utterly consuming; we are possessed by it, and everything else pales by comparison. Simone de Beauvoir reported that when her mother was sick with cancer she interrupted a friend who had started to tell a lively piece of gossip to say, "You ought not to tell sick people stories of that kind, it doesn't interest them."

## The Commonweal Cancer Help Program

This week-long residential program is for people with all kinds of cancer who are receiving the best of available medical care but want to do something more.

Director Michael Lemer, Ph.D., recently used his MacArthur Foundation "genius" grant to visit thirty of the world's best-known alternative cancer treatment centers. He returned from his research convinced that a common characteristic of many of the best centers was a high concentration of health-active, health-responsible patients seeking to integrate the best of conventional and alternative cancer therapies. (A book describing Lemer's experiences and conclusions is available.)

Lemer and his colleagues now offer week-long seminars eight times a year at Commonweal's rural coastal retreat center. Those who attend participate in imagery exercises, meditation, gentle yoga stretching, vegetarian diet, mas-

sage, art therapy, guided support groups, and classes on informed choice in both conventional and alternative cancer therapies. Participants are encouraged to develop their own highly personalized approaches to recovery, which often include elements of a psychological or spiritual quest. Goals for healing include changes in diet, lifestyle, relationships, living arrangements, or work goals.

As a result of the seminar, people are often able to develop a less frightening and more hopeful relationship with their illness. As one recent participant commented, "The retreat experience was one of the richest experiences of my life. I learned to see healing in a whole new way: as an effort to discover who we really are." —Tom Ferguson, M.D.

### The Commonweal Cancer Help Program

Ashoka Thomas, Coordinator, P.O. Box 316, Bolinas CA 94924; (415) 868-0970

Initiates often encounter tribal ancestors and helpful and hostile spirits in the course of their journeys. Some sick people, and their close relations, have similar experiences. Recently, when I was up most of the night with nausea, the spirit of a *curandero* ministered to me just before dawn, placing a hot bowl of burning incense on my solar plexus while chanting prayers in Spanish; I was tempted to discount the experience as a figment of my sleep-deprived imagination until I realized the ceremony had worked. By the time the sun rose, the nausea was gone. A friend of mine saw Mother Mary standing on the lid of her garbage can during an allergic reaction to mold on a dark and rainy November evening; she has been building altars to Mary ever since.

Illness is not the only route to this invisible underworld that informs the perilous ground we walk upon as human beings; all sorts of crises, humiliations, and woundings can take us there. But illness is one of the most reliable routes, simply because it is engineered by the strange and intractable forces of physical life, and if we are ever to understand the mysteries of healing, it behooves us to acquaint ourselves with the powers of the deep, that mysterious Presence that is found amid "Absence, Darkness, Death."

I was taking 24 aspirin a day. The dry bones were grating against each other and the pain was awesome . . . when I

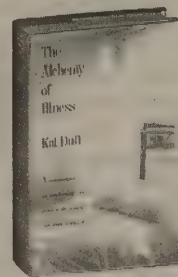
felt I could stand it no longer, I spoke to the pain:

Me: You hold me tight in your grip and do not let me go. . . . Why? Why are you here?

Pain: I am here to get your attention. I make known my presence. I have a power beyond your power. My will surpasses yours. You cannot prevail over me, but I can easily prevail over you.

Me: But why must you show me this power and destroy me with it?

Pain: I show you because I will no longer let you disregard me. You can no longer treat me as if I am not. —Albert Kreinheder



### The Alchemy of Illness

Kat Duff. Pantheon Books, 1993; 159 pp. ISBN 0-679-42053-3

\$19 (\$21 postpaid) from Random House Inc./Order Dept., 400 Hahn Road, Westminster, MD 21157; 800/733-3000

# In the Face of the Hurricane

BY PHIL CATALFO

Phil Catalfo, who will be the domain editor for the "Family" section of the Millennium Whole Earth Catalog, wrote "Under Siege" (WER #75:10), about the ways the Catalfo family coped with Gabe Catalfo's leukemia diagnosis. Gabe's leukemia, we are happy to report, is still in remission. —HLR

When cancer enters your life, not only is the entire landscape of that life scorched, but a whole new galaxy of alien information must be assimilated — blood counts, chemotherapy regimens, unpronounceable terms, arcane protocols, sci-fi-like explanations of the body's innermost workings. For those without medical training this can be as difficult as the fact of the disease itself. Practitioners are usually committed to educating patients and their families about the medical aspects of the illness and its treatment, but effective self-education resources are golden. Even more valuable are those that suggest good ways to deal with the part the medicos really can't help you with — the psycho-emotional fallout of a life-threatening disease.

Fortunately, some excellent books are available now, that illuminate either or both sides of the struggle to cope with cancer. An excellent listing was published in WER #71 (Summer 1991), which just happened to appear a few months after my son became ill, and inspired me to do further research. These books are the best of what I've found.

## Understanding Cancer

The most comprehensive guide I've seen. It's used in college pre-med courses (it was inspired by courses the author took twenty years ago and later taught), but the layperson will find it perfectly readable. The book covers everything: the biology and causes of cancer; the different types (i.e., sites) of the disease; prevention and early detection; treatment; and patient rights — in fact, a whole section especially for the patient sheds light on many of the most difficult personal concerns that come with cancer, including

sexuality, job discrimination, and "the will to live." A section added to the revised edition discusses AIDS, both in relation to cancer and in its own right. It's a model health-education text, and has become the first book I turn to for basic cancer-related information.

### Understanding Cancer

Mark Renneker, 1988; 504 pp. ISBN 0-915950-86-3

**\$24.95** (\$28.45 postpaid) from Bull Publishing Co., P. O. Box 208, Palo Alto, CA 94302-0208; 800/676-2855

■ The "how" of cancer can appear simple on one level, while on another it is profoundly perplexing. For example, a transformed cell is able to reproduce itself and pass its defects on to subsequent generations — so there must be damage to the DNA or to some aspect of the reproductive process. When the problem is viewed in terms of the several functions of the cell we have discussed, it can be seen that there are a

number of vulnerable "transformation" points.

Let's look at some possibilities. Once again, the distinguishing characteristics of cancer cells are:

- rapid reproduction rate
- loss of membrane integrity
- loss of respect for growth limitations (no contact inhibition)
- ability to "deceive" — the immune system, despite the presence of tumor markers on the cell membrane
- changes in cell biochemistry and character (e.g., Warburg Effect)
- loss of nuclear integrity and chromosomal stability.

## Everyone's Guide to Cancer Therapy

As comprehensive in its discussion of cancer treatment as Renneker's book is in discussing cancer generally. It does include good introductory chapters about cancer, and supportive information on living with cancer, relaxation, etc., but its genius is in organizing its bulk by type of cancer and detailing precisely what methods are typically used to treat that type in its various stages (indeed, its clear explanation of the stage-definition process was a revelation to me). Its broad explanations of different treatment methods are excellent (the one on bone-marrow transplants is the best I've seen) and even include such exotic techniques as biological (immuno-) therapy, laser therapy, hyperthermia, and a (somewhat tight-lipped) chapter on "questionable and unproven" therapies. Indispensable for the newly diagnosed patient, especially one facing difficult treatment choices.

### Everyone's Guide to Cancer Therapy

Malin Dollinger and Ernest Rosenbaum, 1991; 624 pp. ISBN 0-8362-2417-5

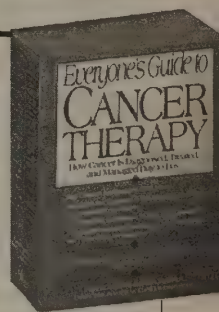
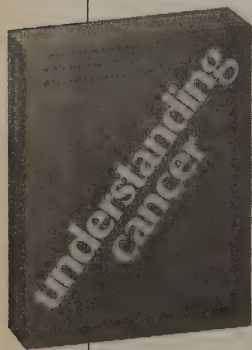
**\$19.95** (\$21.95 post-paid) from Andrews & McMeel, P. O. Box 419242, Kansas City, MO 64141; 800/826-4216

■ Sixty percent of esophageal cancers appear in the cells lining the esophageal tube (squamous cells), usually in the upper two-thirds of the esophagus. About 40 percent develop in the glands (adenocarcinoma) in the lower third. One to 2 percent are relatively rare tumors, such as melanoma, primary lymphomas or tumors in the smooth muscles, among others.

**How It Spreads** Carcinoma of the esophagus usually starts on the surface layer, invades the surrounding tissue and grows to cause an obstruction that makes swallowing difficult. It spreads through the lymph system to lymph nodes. The most common sites for metastases are the lymph nodes, lungs, liver, brain, adrenal glands and bones.

## Third Opinion

Sometimes there appear to be no good choices, or the type or stage of cancer is such that doctors can offer little help or hope. For anyone facing so bleak a prospect, or simply more alarmed by the word "chemotherapy" than "cancer," this copious international listing of alternative resources (treatment centers, educational centers, support groups and informational services) could be seen as a kind of map of the territory where hope and help may yet be found. The author's young daughter contracted a rare cancer in the late 1970s, so he knows about hopelessness;



the book grew out of his having sought unconventional treatment for her, and the fact that, even though she later succumbed, "the quality of her short life was enhanced by the use of complementary treatments." There is no

"silver bullet" here any more than anywhere else, and it's impossible to assess just how useful the listings will be to any one person or caregiver; anyone using this book, as any other health resource, should do so with open eyes and common sense. But that's easy to do: the information here is presented in a sober, informed, yet open-minded way that will encourage the reader to continue searching — the encouragement itself can be a life-affirming, or even lifesaving, response to a dire situation. Skeptics may think a good deal of what's profiled here is "questionable or unproven," but when what is unquestionable and proven is that you'll die unless you manage to score a miracle, going out on a limb may not seem like such a bad idea. One person's "quackery" is another person's pathfinding insight, and this book is a good place to start exploring the terra incognita where those two zones intersect.

### Third Opinion\*

(An International Directory to Alternative Therapy Centers for the Treatment and Prevention of Cancer and Other Degenerative Diseases)

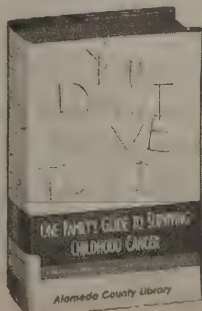
John M. Fink, 1992; 312 pp.  
ISBN 0-89529-503-2

**\$14.95** (\$17.95 postpaid) from Avery Publishing, 120 Old Broadway, Garden City Park, NY 11040; 800/548-5757

\* Previously reviewed: see WER 67:47.

### You Don't Have to Die

The most elusive information, in my experience, is that which shows how to maintain something like sanity, psycho-emotional-spiritual balance, in the face of the cancer hurricane. Those gales blow most fiercely when the patient is a child. GERALYN and CRAIG GAES's son JASON successfully battled with lymphoma and wrote the now-classic *My book for kids with cancer. You Don't Have to Die* is simply an outstanding "owner's manual" for par-



ents of kids with cancer: unflinching and wise on the personal stuff, informative to a fault (it assumes no prior medical knowledge), full of smart how-to advice, loaded with resources. I first saw the book at an Oncology Family Camp; all the parents examining it were raving about it, with much the same first reaction: "If someone had given us this book soon after our kid was diagnosed, it would have spared us a lot of fumbling in the dark."

### You Don't Have to Die

(One Family's Guide to Surviving Cancer)

Geralyn and Craig Gaes and Philip Bashe. Villard Books, 1992; 124 pp.  
ISBN 0-679-40300-0

**\$19.50** (\$21.50 postpaid) from Random House Inc./Order Dept., 400 Hahn Road, Westminster, MD 21157; 800/733-3000

With the onset of Jason's lymphoma, Tim suddenly began avoiding his brother. He simply could not believe that he didn't have cancer himself if his brother did. Jason and I have always done everything together and are so much alike, he reasoned. What if I have these things growing inside of me, only nobody knows it?

### Moms Don't Get Sick

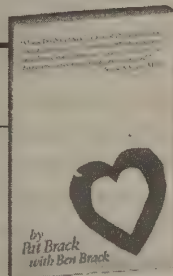
This can be seen as the flip side of the Gaes book, in a sense: the story of a mother's bout with breast cancer, and how it affected her son (and co-author). This too is a very personal account, especially affecting for Pat Brack's honesty and undramatic self-awareness. But the real surprise is young Ben, whose remarkably articulate and forthright entries are the heart and soul of a potent rendering of absolute upheaval and what it takes to get through it.

### Moms Don't Get Sick

Pat Brack and Ben Brack, 1990; 106 pp. ISBN 0-937603-07-4

**\$9.95** (\$11.70 postpaid) from Melius Publishing, 118 River Road, Pierre, SD 57501; 800/882-5171

When Christmas morning finally arrived it was great and I even forgot that Mom had cancer. We all got up early like we always do and went downstairs to the stacks of presents piled by a beautiful tree. I got a Lego castle which I really wanted and my brother Jeb and I started building it right away. Friends came bringing more presents and we had a wonderful turkey dinner with stuffing and Christmas pudding. I felt so happy that I jumped on Mom to give her a



huge bear hug. Everybody said "NO" and made me stop. I can still feel my ears turning red and my body going all hot inside. Mom looked so sad. Things were not back to normal at all.

### Life in the Shadow

By far the most gripping of these books, *Life in the Shadow* chills you with the inescapable awareness of how this damn disease haunts one's every waking moment, but also emboldens you with the thought that when life grabs you by the short hairs, the prudent thing is to grab back. Bill Soiffer, a respected environmental reporter, survived five relapses of Hodgkin's Disease (the "good," i.e. usually curable, lymphoma), underwent a bone marrow transplant, and did not secure a happy ending — he closes the book with courageous words after the transplant fails to cure him. He died shortly after his work was published, having reported the hell out of his own fifteen-year struggle and that of numerous other Hodgkin's patients. There is topnotch information-gathering and unadorned poignancy in the telling of many sad or uplifting stories, but at root this book is a homily, which he sums up this way: "Cancer can impair a body but not an irrepressible spirit."

### Life in the Shadow

(Living with Cancer)

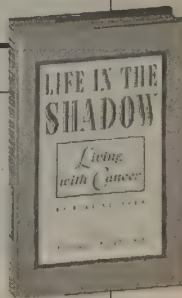
Bill Soiffer, 1992; 191 pp.  
ISBN 0-87701-882-0

**\$18.95** (\$21.45 postpaid) from Chronicle Books/Order Dept., 275 Fifth Street, San Francisco, CA 94103; 800/722-6657

For me cancer therapy is like surfing. I have ridden each wave of treatment as far as it would take me until a new wave of treatment came along. After all when I was first diagnosed, in 1976, a bone marrow transplant was not an option. And with each relapse a new combination of chemotherapy emerged. I hoped that if I waited long enough I would catch a wave that would be a permanent cure.

I am now riding a gentle wave of optimism. I believe that with the knowledge of immunology increasing at an exponential rate, science is on the verge of unlocking the vexing mysteries of Hodgkin's disease, and that researchers a few decades from now will look back and compare chemotherapy and radiation to the days when leeches were used to cure people.

To keep my sanity, I have to believe that. Yet normalcy is a state I will never know again.





# Scenes from the Life

BY PATRIZIA DiLUCCHIO

People in frontline occupations have a natural affinity for one another. Nurses, doctors, policemen, firemen, military officers — we deal in blood and glory and guts and gallant doomed gestures. We have that odd black humor that other people find so paralyzing. Our most intimate experiences are shared with strangers whom we see once, twice, three times; then never again. We know how to come through for each other.

Consider: Major Hervol lay on a hospital bed, his eyes shut tight. His wife hovered nearby. Her face was made up to look twenty-five — not our twenty-five, but her twenty-five: a ghost that had haunted them both for the past sixty years. Mrs. Hervol, it was evident, had been a Great Beauty in her youth. The adaptive traits that had sustained that Beauty — her air of flustered helplessness, her birdlike movements — had destined her personality to premature extinction.

"Major Hervol," I told him in my bright, emphatic nurse voice, "you must eat! Won't you let your wife help you eat?" "Oh no," said Mrs. Hervol, backing away from his bed. "I couldn't. I don't know how!"

"It's very easy, Mrs. Hervol. You put a small amount of food on a fork. You put the fork into Major Hervol's mouth. And you remind him to chew on the right side."

"I couldn't," she repeated. There was panic in her voice.

Major Hervol was eighty-three; he had recently had a stroke. The entire left side of his body was paralyzed — arm, leg, and (surprisingly, because I expected the contralateral effect) the left side of his mouth. If

men grow into the faces they deserve, he had been a good man, and had had a good life — his hair was shock-white, his face genial and unlined, his bright blue eyes good-humored and kind. He suffered the ministrations of my profession patiently. When I tried to feed him, sometimes he would take the food; more often he would shake his head firmly and raise his unaffected right hand: enough. But he would always smile. He was not smiling now.

"Well, then, Mrs. Hervol," I said. "A bath. I was about to help Major Hervol with a bath. Would you like to help Major Hervol with a bath?"

(Note here the careful avoidance of patient as object. One never says "I was about to give your husband a bath." One never alludes to the dependence that has reduced one's patient to the status of passive entity.)

"Oh no, I couldn't," she said, backing away, frightened. "I couldn't! Do I have to?"

"I'll take her out," said the grandnephew who had brought her to visit. He was an extremely handsome young man. One could see the gene pool at work. We exchanged commiserative glances. The narrative trails that people leave, penumbræ against the solid realities of the present tense — here was a woman who for her entire life had been taken care of. And here she was faced with the prospect of taking care of someone else. And it was horrible to her.

The charge nurse sought me out. "You have a new admission," she said apologetically.

Major Hervol was getting a roommate: Colonel Breece. Colonel Breece's arrival had been whispered

*Patrizia DiLucchio's first published work, "Birthtales," was the cover story for WER #78. Because we had assigned several articles on the topic of health care policy for this issue, Patrizia came to mind as a writer who could give us the perspective of a frontline health care worker. This piece is not about health care policy, but it does give us a look at hospital life through the eyes of a healer. DiLucchio works as a nurse on a pediatric oncology ward in Northern California. You can't get much closer to the front lines of health care than that. —HLR*



about all morning —this was a military hospital, after all, and Colonel Breece was high in the arcane scheme by which people in uniform mete out personal respect.

Colonel Breece was a middle-aged man who looked very, very tired. He had pneumonia. He had non-Hodgkin's lymphoma. He had a tight-faced wife with sausage curls who was in a hurry to leave him. "You don't have to leave," I told her. "I can examine him with you in the room."

"Oh, I have things to do at home." Her desperation to escape bordered on bad manners. With anyone else, she would have caught herself. But I was a nurse, faceless in my white uniform. I really didn't matter.

"So. What brings you into the hospital?" I asked Colonel Breece.

"Oh, I have a little touch of pneumonia," he replied cheerfully in his deep, gravel voice. He had a professional commitment to cheerfulness and competence — one could tell that about him immediately. He would tell me about the pain in his chest and the night sweats that had kept him awake nights, but he would do so in the most conversational, dismissive way possible. Personal agony was not on his agenda.

Later, Mrs. Hervol's nephew cornered me in the hall. "You see what the situation is."

"Oh, yes . . ."

"So, how much better is Earl going to get? I mean, he looks pretty hor-

rible. If you had known him. He was so active. He was a handball player, you know? And he took total care of Lillian. I mean, that woman has never done a thing in her life. For forty years, he's done it all."

The nephew kept touching me — on the arm, on the shoulder. A family of charmers, I thought. A family of people who know how to get what they want out of other people by dazzling them with physical charisma.

"He's all there, mentally," I told the nephew. "Of course, he's old; that's a strike against him. But he's strong. If he doesn't give up, if he doesn't have another stroke, he'll do okay. I don't know about her, though."

When I went back into the room, Colonel Breece had fallen asleep. Awake, he looked all of his fifty-three years, but he slept curled up with his right hand between his thighs like a boy's, and his face assumed the same expression of provisional dreaminess that his boy's face must have had way back when in Waco, Texas. Sleep erased the lines from his face — he looked about twenty.

Of course, this is a love story.

Hospitals are sensory-deprivation environments. To successfully occupy them as a nurse, you must sustain one of three mental attitudes.

Either you must become totally, exhaustively absorbed in the tasks

at hand: every drop of urine that trickles through the catheter tubing must be counted, must be reported back to the physician in charge with full expectation that it is somehow significant; every transient rise and fall in blood pressure must be recorded on a piece of paper especially designed for that purpose, and monitored intently, fluctuations in the stock-and-bond market of the corpus. Or you become the perfect co-dependent: your patients become your family; you stay long after your shift is over to remain by their side; you have no family of your own.

Or you do what I do. You become a secret agent.

In the hallway, on our way back from one of our innumerable trips to the x-ray machine, I debriefed Colonel Breece.

"So," I asked, "where did you grow up?"

"Waco, Texas."

"A little town that's garnered more than its fair share of press recently."

He laughed. "To be sure. But it was very different when I was growing up there. Very different. There were a lot of Amish. They all lived on the east side of the lake. They were nice people, too. I've often wondered what happened to them, all the old people."

"The only things I know about Texas I learned from Larry McMurtry novels."

"It's a good place to start. They're pretty accurate."

"Did you read *The Last Picture Show*?"

"Oh, yes. Though I really didn't need to read it. I lived it for about the first twenty-one years of my life."

"And then you decided to join the Army?"

"It was decided for me," he said a little ruefully. "I was drafted."

"For Vietnam?"

"No, I was drafted before Vietnam," he said softly.

"And you liked it?"

"I did after I was commissioned."

*Oh, what can ail thee, knight-at-arms / alone and palely loitering?*

On an impulse, I asked, "Would you like to go outside for a moment? Would you like to escape?"

"Sure!"

I wheeled his wheelchair out the hospital's front doors. A beautiful day.

"This is the typical California landscape," I told him. "Blue, blue sky. Those live oaks. That sere hillside."

He looked at me and tried to smile. I saw then how exhausted he was. "I think I need to go in now."

OF COURSE, the other part of this was that Colonel Breece was a trained killer. Despite his genial manner, one could easily picture him gunning down emaciated North Vietnamese footsoldiers or swarthy Iraqi carabinieri. One could easily imagine the blood on his khaki uniform, the smoke rising from his gun. He would take no particular pleasure in killing, true, but he would do it and he would do it efficiently, ruthlessly. He'd have a beer or two afterwards — no more than two — there was nothing he particularly needed to forget. And no interior alarms would disturb his sleep — not unless I imagined the universe to be a moral place and his disease to be a type of autoim-

mune retribution. I didn't want to imagine this. I liked Colonel Breece.

Evenings were for family visits. Major Hervol's family had returned, deployed in formation on opposite sides of his bed: here the birdlike wife (dripping now with diamonds), the handsome nephew, the handsome nephew's grandmother who was also Mrs. Hervol's sister; there, Major Hervol's son and daughter-in-law from the despised first marriage.

"Dinnertime!" I sang to Major Hervol in the cheery voice. "Who would like to help Major Hervol with his meal?"

"Oh, I couldn't, I couldn't, I wouldn't know how," the wife began.

"I will," the daughter-in-law said grimly. "Hey, Pops. Eat for Louise, huh?" Major Hervol smiled faintly and patted the daughter-in-law lightly with his good hand.

On the other side of the room, Colonel Breece's family had assembled, the wife somewhat more cheerful now that she had her son and daughter as reinforcements. The son traded ballgame scores with his father. The daughter twirled a strand of her honey-colored hair around one perfectly manicured finger and stared out the window. "Don't you ever go home?" asked the wife when she saw me.

Voices were raised in the other half of the room. "I cannot believe this, Lillian," the daughter-in-law was saying. "Cannot believe it! After everything Earl has done for you all these years and you *won't* even feed him —"

"Let her alone!" The handsome nephew had stashed the charm, had turned angry and dangerous. "It's not as though you ever cut her the slightest chance —"

Mrs. Hervol was weeping.

"Ladies, gentleman." One brief glance at the nephew: had he caught the humor of the singular

**"Major Hervol," I said softly.**



noun? Would he allow himself to be placated by it? A faint smile on the nephew's mouth: he had, he would. "You are upsetting Major Hervol. Can't you see that? I'm afraid I'm going to have to ask you all to say goodbye now."

After I ushered them out, I went back over to Major Hervol's bed. Major Hervol was still lying there with his eyes shut. "Major Hervol," I said softly. "Look at me." The eyes opened. "Major Hervol, this is going to be the hardest thing you have ever had to do in your life. But you are going to have to do it." The white-haired man in the bed gave a long, shuddering sigh. Then he reached up, pulled me down to his level and kissed me on the cheek.

Colonel Breece's wife had watched the scene uneasily. Colonel Breece, the son, and the daughter had appeared to notice it not at all.

In the early mornings, we all watched television together. The A.M. news programs, perky Kathie Lee Gifford, the low-rent game shows. On "Jenny Jones," a recently divorced nineteen-year-old boy and his forty-five-year-old ex-wife analyzed for the studio audience exactly what had gone wrong with their marriage. It had all begun when the ex-wife stole the boy away from her daughter, whose boyfriend he was. "Can you believe it, Major?" I was giving Major Hervol a sponge bath. The Major



***“Look at me.” The eyes opened. “Major Hervol, this is going to be the hardest thing you have ever had to do in your life. But you are going to have to do it.” The white-haired man in the bed gave a long, shuddering sigh. Then he reached up, pulled me down to his level and kissed me on the cheek.***

laughed and began to speak. His speech was garbled and unintelligible; in good-humored frustration, he gave up, shook his head, raised his eyebrows expressively: no, he could not believe it.

“The kid’s too young to have any idea what marriage is all about,” said Colonel Breece. “But that woman! She should be smarter than that. Are you married?”

“I am,” I lied. “I’m married and I am the mother of two beautiful boys, ages eight and six.”

“I’m sure they’re right fine kids, too,” said Colonel Breece admiringly. “They have a right fine mother.”

Once tempted to lie, I did not stop. I provided Colonel Breece and Major Hervol with the details of an entire life — not my life, to be sure, but they sounded convincing enough to be somebody’s life. The men enjoyed them, especially the parts about the frequent fights and reconciliations. “You would have made a good Army wife,” Colonel Breece told me.

“It’s a hard life,” I said. “Moving every couple of years, uprooting your home, losing all your friends.”

“Not so hard,” said Colonel Breece jovially. “Why, your friends come with you! Or you make new friends. And the others always turn up somewhere along the line.”

I had a flash of what his life had been like. Transferred to a new base every couple of years or so; assigned to a new secret mission. All bases looked alike to him; the subtle differences were in the planes he flew, never returning home for weeks at a time. The subtle differences were in the countryside surrounding the bases — sometimes in countries where they fueled your plane as soon as you landed; sometimes you had to wait for fuel, enduring or being entertained by (depending on your attachment to the customs of your native soil) colorfully alien transactions — the old peasant lady who wanted to trade you a prize pig for a trip in the plane; the cherubic child who wanted to sell you an Army-issue portable tape recorder. The adventures of men! And meanwhile your wife waited stolidly in lookalike barracks housing. She raised your children, she did your laundry. She took up needlepoint or crocheting.

I felt sympathy for Mrs. Breece, that tight little woman who would never like me.

In the early afternoons, Colonel Breece was visited by members of his staff. They were big men in their khakis that reminded me incongruously of Boy Scout uniforms. Colonel Breece, in their midst, looked handsome and animated. They were unfailingly deferential; they called me Ma’am. When I had to

draw blood from Colonel Breece, one of them hastily got up to leave the room: needles, he explained apologetically, made him queasy.

“That Parker,” Colonel Breece crowed after they left. “Can you believe? I was once as big and had as much hair as that sonofabitch. I miss working out. That time in the middle of the day — when I went for my run, when I went to the gym — that was *my* time.”

“You’ll work out again,” I told him. “And your hair will grow back once your chemotherapy is finished.”

Colonel Breece smiled at me cheerily. “Course it will.”

“You know, I read something interesting last night,” I told the two men the next morning. They were both to be discharged — Colonel Breece to home and a fourteen-day convalescent leave (which he would almost certainly ignore); Major Hervol to a rehabilitation facility for stroke victims. I was shaving Major Hervol. “You want to grow a mustache, Major Hervol?” I asked. “I think it will make you look even more devilishly handsome.” The white-haired man grinned, nodded his head and grasped my hand: *yes*.

“I read that if you ask people, ‘What would you change, if you had it to do over again,’ that people in their forties and fifties say *everything* and begin to list all the changes they would make. But people in their seventies and eighties say they wouldn’t change a thing. They’ve come to peace with themselves.

“Would you change anything, Major?”

The white-haired man looked at me with his blazing blue eyes and shook his head gently: *no*.

“Would you, Colonel?”

The slender man in the other bed considered. “I think I would have become a small-animal veterinarian. And I would have stayed in Texas.”

"Not a *large-animal* veterinarian?" I teased.

He smiled. "I had enough of that growing up on the farm."

"What about the Army?"

"Oh, the Army." He shrugged.

"There were plenty enough times I considered getting out of the Army. If I had it to do over again, no, I wouldn't have stayed in the Army. But you do what you do." He looked at me with an expression that would have been wistful on somebody else's face. "And what about you? Would you have done anything differently?"

"Oh, I would have done it *all* differently. I line my pillow with regrets. It's an occupational hazard."

We looked at each other across the room, across a universe of possibilities, and for the first time I thought he looked sad.

TO WRITE UP Colonel Breece's discharge summary, I had to thumb through his medical chart. Admitting diagnosis: pneumonia. Well and good: I had seen that one before. But what was this, scribbled in on another page, in some doctor's cramped scrawl that almost seemed like an afterthought? *Stage IV, non-Hodgkin's Lymphoma.*

"Colonel Breece has Stage IV?" Shaken, I asked the charge nurse.

She looked up ruefully from the orders she was transcribing.

"Yes. He does."

"So he's —"

"Dying. Yes. Doctors think he has infiltrates in his lungs. He'll probably be dead in two months."

So, it turned out, we both had secrets. Hopeless secrets. There was no one who could cure him and there was no one who could cure me — for who will heal the healer? ☹

**B**OTH LIFE EXPECTANCY AND THE STANDARD OF living have improved markedly in the West over the past few centuries. Both are acceptable indices of health status — but they are mostly the result of improved hygiene and better nutrition. With the notable exception of the introduction of antibiotics, medicine has had a very small part to play. Yet medicine has become inextricably linked in most American minds with the notion of health.

Why do we pump millions of dollars into intensive-care nurseries (ICNs) and continue to underfund prenatal services? ICNs are characterized by labor-intensive bedside care (twenty-four-hour nursing, frequently delivered on a one-to-one basis) and expensive technology (ventilators, cardiac monitors, intravenous pumps and

cal probability. But who will turn away from the neonatologist on the five o'clock news who says, "Give me \$500,000, or this baby will die"?

Nobody wants to be in the position to choose which individual will live and which will perish. America has steadfastly refused to arrive at an agreement about

## The Trouble With

BY PATRIZIA DILUCCHIO

still more exotic machines that take an infant's blood and circulate it extracorporeally). It is not unusual to end up spending \$500,000 to "save" a child who will turn out to be completely dysfunctional and end up surviving only a few years. Prenatal health, on the other hand, is very cost-effective: education, advice on good nutrition, prenatal vitamins and screening for a few key things — such as gestational diabetes or hypertension — are very inexpensive services to provide.

It's one thing to be able to say with certainty that the babies of any fifteen women receiving prenatal care will, on the whole, be healthier. We are talking the language of statisti-

the value of life, or even at a process by which such consensus might be reached. Every attempt to systematize ethical decisionmaking has been generated through common law, handed down on a case-by-case basis as a result of the mediation of legal disputes. The upshot is that increasingly large amounts of money are poured into saving increasingly small increments of life. Two-thirds of all Medicare expenditures — a pool that primarily includes individuals over 65 — occur in the last year of life, and half of that amount occurs in the last month of life.

Medicine is expensive. Ap-

proximately \$244 billion of this year's federal budget — 16 cents out of every federal dollar — have been allotted to the giant health entitlement programs, Medicare and Medicaid, and other federal health programs.

These expenditures were *not* made on education, public transportation systems, libraries, public parks, the arts, or job skill training. Which is not to say that Cesarean sections, kidney transplants and similar feats of biomedical expertise may not be good and useful things; but they represent an allocation of resources

in other ways: it does not include people under, at, or slightly above the federal poverty level who presumably are eligible for Medicaid. But most of these individuals are unable to find providers who will give them medical care — the Medicaid reimbursement rate is just too low. Many Americans without health insurance hold jobs that do not provide health benefits; others are self-employed or temporarily between jobs; still others — HIV carriers, for example — are excluded from insurance without special provisions.

Debates about cost containment and access leave

unresolved. The medical industry has acted to drive its per-unit cost outrageously high (outside the medical-care industry, increased use of technology is associated with a lowering of costs).

Physicians are both the brokers and providers of medical services. It is assumed that patients are far less knowledgeable about the costs, benefits and risks of interventions than physicians. This assumption seems perfectly reasonable when the problem is a life-threatening medical emergency, the medical diagnosis is unambiguous, and the best treatment is indisputable.

But, increasingly, medical care does not concern itself with life-or-death decisions. Medical science is increasingly attempting to treat chronic diseases. ICUs are filled with people who have what might be classified as lifestyle diseases — end-stage lung

disease, heart disease, renal disease.

In this century, the definition of disease has expanded to include those conditions traditionally lumped together as "old age," as well as a host of disorders not previously regarded as medical problems — pregnancy; menopause; emotional dysfunctions; the treatment of alcohol and drug abuse. This progressive medicalization of the activities of daily living has further enhanced the importance of physicians in the hierarchy of health.

WHY DOES a person have to have four years of medical school, one of internship and

two of a residency to prescribe prenatal vitamins for a pregnant woman? There is a simple answer to this: "malpractice crisis."

"Malpractice crisis" means "disturbances in the market for medical liability insurance." Medical liability defines the parameters under which physicians are accountable to their patients for lapses in their professional judgment. A relatively small proportion of physicians is responsible for the greatest dollar volume of malpractice payments. Malpractice premiums rarely reflect an individual physician's risk to the insurer — although in exceptional cases, if an MD has a lot of claims against him or her, what he or she pays out may go up. Economic self-interest may predispose physicians to give more rather than less care (where more care is not synonymous with *better* care), and to accept certain clinical findings more readily than others.

Physicians dominate the field of health-care delivery, but that cannot be said to have improved this country's overall health status. Our current model of medical intervention is a major cause of unequal access to health care, and to unacceptably high costs — not only the costs of medical intervention, but also the positive benefits of other services that must be foregone because of the expense of providing medical care. Every dollar that goes into the medical entitlement programs may be seen as a dollar that does not go into subsidizing education. Interestingly enough, the single thing that correlates most closely with overall positive health status is education — not access to physician care, not access to technology. ☛

## Health Care

Patrizia DiLucchio is a healer and a writer. She also has a degree in health care policy analysis. Here's her two cents' worth on what's wrong with this country's health care system. — HLR

away from activities that are also good and useful, and that may in the long run have a far more positive impact on health status.

The climate of economic appraisal during the Reagan/Bush years focused attention upon the debilitating costs of the medical-care delivery system. Thus far, under Clinton's administration, an equally controversial subject has been access to care. Access means health insurance. The number of Americans without health insurance is estimated to be 37 million; that estimate has remained relatively constant since 1984 or so. But the estimate is misleading in a num-

ber of ways: it does not include unchallenged deeper assumptions about the actual content of medical practice and the current structure of professional authority. Health maintenance is not synonymous with medical intervention.

Health-care reform may benefit most from redefining the roles of its two key elements — physicians and technology. Physicians are trained hierarchically as life-or-death interventionists. Acute care is emphasized; prevention is underplayed. The proliferation of expensive technology reflects physicians' preoccupation with extreme states of illness. The excessive production and inefficient use of this technol-

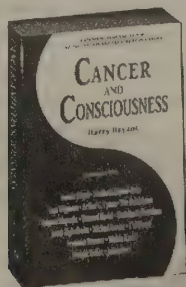
## Cancer and Consciousness

The whole notion of how body and mind interrelate is easy to get wrong, especially when the stakes are high. "Okay, I'm terribly sick, I'll just change my consciousness and I'll get better!" I'm not saying it's impossible, but it's a hard trick to do on demand. Plus, changing consciousness because you think it'll "cure" you is like doing good because you think it'll get you into heaven: you wind up doing the right thing for the wrong reason.

*Cancer and Consciousness* focuses not on how to "beat" or "cure" a disease with a better frame of mind, but, simply, on how to look at the world differently so you're seeing it better — more clearly, more accurately, more wisely. On the other side of that, life makes more sense. So does death, it seems.

Barry Bryant began conducting these interviews with various leading lights in the world of spirituality, medicine and spiritual medicine over a decade ago, prompted by his brother's death after a long struggle with lymphoma. The dialogues feature names such as Bernie Siegel, Elizabeth Kubler-Ross, and the Dalai Lama, and unknown (to me, at least) people; all shed much-needed light on a dark and fearful territory, from the metaphysics of chemotherapy to staring down death by embracing life.

A dear friend who has been fighting cancer for several years said this book "helped me see there were other ways of looking at it," which is my nomination for Understatement of the Year. Some of the ideas expressed here will be familiar to fans of new-age philosophy or Bernie Siegel books, but the overall range of ideas — including a brief but thorough exegesis of Tibetan medicine



### **Cancer and Consciousness** (Expanding Dimensions for the Prevention and Treatment of Cancer)

Barry Bryant, 1990; 277 pp.  
ISBN 0-938434-74-8

**\$18.95** (\$23.45 postpaid) from Sigo Press,  
50 Grove Street, Salem, MA 01970;  
508/740-0113

— is hard to match. The net effect is to teach readers more about the mind than about cancer — not such a bad idea. —Phil Catalfo

• The cancer syndrome brings with it a type of inner cold war, a moratorium on communication with our own bodies, an inability to hear the signals and messages coming to us from both physical and intuitive levels of our being. All too often, this syndrome makes a living hell out of the struggle to live. Because when we see ourselves as victims, alone, we lose sight of our innate ability to heal ourselves and one another.

■ If catastrophic illness is to teach us, we must be willing to face our terror of death and the fear of change with which we live on a day-to-day level. Sharing our fears is a key to both recognizing and dealing with them; dialogue is a means through which

even the terror may be transformed and/or released.

■ Bryant: You're very optimistic. Some would accuse you of spreading false hope.

Siegel: The concept of false hope is one of the most ridiculous things I know of. I ask students to give a definition of false hope. A "correct" answer would be, "Telling a patient he can live, when ninety percent of the people with that condition die." Phooey! Why should we try to authorize hope according to the statistics? Hope is the variable that can change the statistics.

If only ninety percent die of a condition, then let's stress the fact that that person has a chance of not dying. If you tell a group of those people that they are the ten percent who will survive, you may find that thirty percent or forty percent or fifty percent get better.

The professionals make a real mistake, say-

## Refuge

This one's a page-turner — an alternately clinical, poetic, exuberant, and terrifying chronicle of the 1983 record rise of Great Salt Lake, interwoven with a haunting, disturbing search for clues as the author witnesses several cancer deaths in her family. Terry Tempest Williams, daughter, wife, mother, Mormon, and naturalist at the Bear River Migratory Bird Refuge, describes the geology of Great Salt Lake, the varieties of birds, the complicated and often irrational local politics, and the process of caring for her dying mother, in clear, precise, nearly terse sentences. Behind the family histories and flood details, larger issues gradually surface to climax with some wrenching questions: Where is the line between public stewardship and interference when cities are faced with natural disaster? Why is the process and language of caring for the dying such a secret, isolated among women? And why are so many in Tempest's family circle dying from cancer? There are no clear answers, but you might gather that our military-industrial complex is one of the mystery guests. —Lisa Anderson

■ lake level: 4209.10'

Mother began her radiation treatment this morning. They tattooed her abdomen with black dots and drew a grid over her belly with a blue magic marker.

"After the technicians had turned my body into their bull's-eye," Mother said, "the ra-

diologist casually walked in, read my report, and said, "You realize, Mrs. Tempest, you have less than a 40 percent chance of surviving this cancer."

"What did you say to him?" I asked as we were driving home.

"I honestly don't remember if I said anything. He rearranged the machinery above me, rearranged my body on the stainless steel slab, and then walked out of the room to zap me and protect himself."

"How do you feel, Mother?" I asked.

She folded her arms across her midriff.

"I feel abused."

This afternoon, I coaxed Mother into going swimming at Great Salt Lake, something we have not done for years. On our backs, we floated, staring up at the sky — the cool water held us — in spite of the light, harsh and blinding. I heard the whisperings of brine shrimp, felt their orange feathered bodies brushing against my own. I showed them to Mother. She shuddered.

We drifted for hours. Merging with salt water and sky so completely, we were resolved, dissolved, in peace.

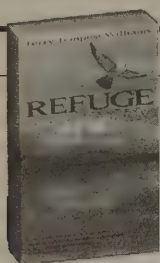
We returned with salt crystals in our hair and sand in our navels to remind us we had not been dreaming.

■ The sandbag banks held City Creek for almost three miles. In some places, the water was three feet deep. Where cars once drove, fish swam. Where pedestrians once crossed, bridges now spanned. A car bridge between the city blocks of 500 and 600

ing, "I don't want to give you false hope. Nine out of ten people with this condition die of it, so you're probably going to die." With that kind of outlook, you're likely to have less than a ten percent survival rate, because everyone gets depressed, and some say, "Why should I even go through all the treatment if I'm going to die of this thing anyway?"

These are questions the profession has to deal with: What is false hope? What is truth? How do you talk to people? What is detached concern versus rational caring?

The most successful cancer treatment programs I've been involved with have one thing in common. They all involve groups of people coming together, supporting each other, and unifying a belief system around whatever it is that they're doing. This works, I think, because cancer comes from a very large collective energy, and it will take large collective energies to deal with it.



### Refuge

(An Unnatural History of Family and Place)

Terry Tempest Williams. Vintage, 1991; 304 pp. ISBN 0-679-74024-4

**\$11** (\$13 postpaid) from Random House/Order Dept., 400 Hahn Road, Westminister, MD 21157; 800/733-3000

South was erected for the price of seventy thousand dollars — no small risk financially, for a mayor who saw his town being truncated, cut in half by flooding and not having a clue how long it might last. But his hunch paid off. The city kept moving in spite of the floods. And the State Street River kept flowing.

The flooding of Salt Lake City lifted everyone's spirits. People went fishing. Signs saying YOU CATCH 'EM — WE'LL COOK 'EM were posted in front of State Street restaurants. A few trout were caught and fried.

lake level: 4211.30'

The Mormon Church declared Sunday, May 5, 1986, a day of prayer on behalf of the weather; that the rains might be stopped. The "Citizens for the Return of Lake Bonneville" also declared it a day of prayer; that the rains might continue. Each organization viewed the other as a cult.

Monday, it rained.

## Spontaneous Remission

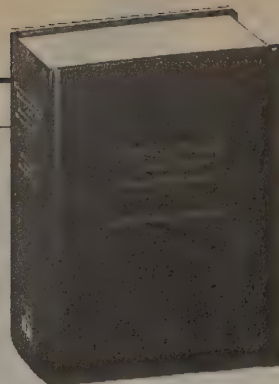
*I'm pretty hardbitten when it comes to the idea of miracle cures for killer diseases. Not wonder drugs, but Lourdes-type miracles. Of course, I know that, as Bucky Fuller always said, "Only the impossible happens," but I just wouldn't want to bet my life, or that of a loved one, on it.*

*Still, the plain fact is that miracles do happen, and we don't understand why or how. In fact, when it comes to "miraculous" recoveries from cancer, we didn't really have a clear idea of how extensively they had happened, until this long-awaited book appeared. Brendan O'Regan, who originated this project some ten years ago (and who died of cancer last year as it was finally being prepared for publication), understood that we would never understand the whys and hows until the whats were clearly mapped. "There should be a field of spontaneous remission research," he once said. "These people are a gold mine. They are nature's successes against cancer." That field has now been demarcated. (The Institute of Noetic Sciences continues to pioneer the definition of the field with its Inner Mechanisms of the Healing Response Research Program.)*

*This is one of the most astounding documents I've ever seen. IONS claims it is "the largest database of medically reported cases of spontaneous remissions in the world," and it's hard to imagine a larger one: at more than 3,500 references (including noncancerous diseases), this is one enormous remissions database.*

*For the most part, this is not easy reading, and it's not a collection of throwing-away-the-cane anecdotes, either. Many of the remissions cited here were followed by relapses. But none can be explained away — they all happened — and the possible explanations are almost excruciatingly tantalizing: cases where an infection of one sort or another preceded a remission/regression, for example, beg trainloads of questions about how the body's own immune response might be better deployed against cancer and other diseases. This, after all, is what's supposed to happen, does happen in those of us who don't get these illnesses, but is written off in those who do contract them — except that, we see here, it happens in some of those cases anyway.*

*How can this be? Why does it happen in some people and not in others? How can we make, or let, it happen? We*



### Spontaneous Remission

(An Annotated Bibliography)

Brendan O'Regan and Caryl Hirshberg, 1993; 735 pp.

**\$49** (\$54 postpaid) from Institute of Noetic Sciences, P. O. Box 909, Sausalito, CA 94966; 800/383-1586

*don't know. We're not even close. But we're closer than we were before this book was released. —Phil Catalfo*

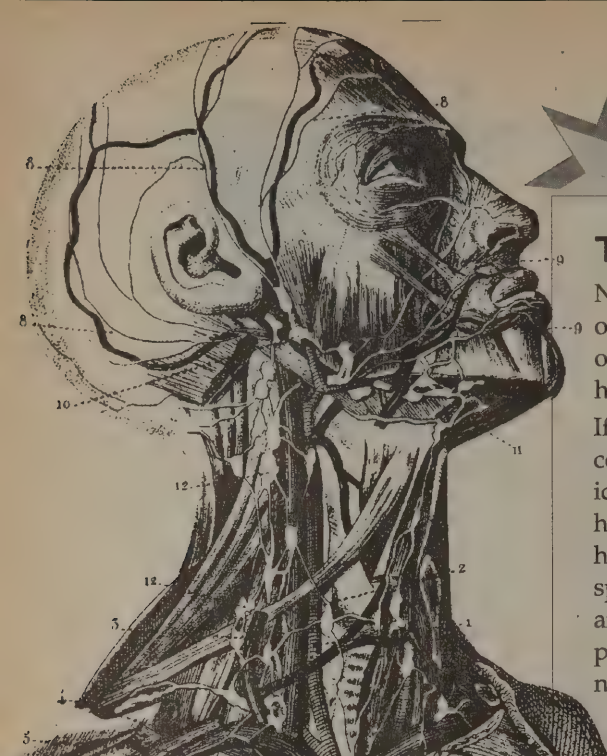
#### Spontaneous Remission in Chronic Lymphocytic Leukaemia

##### Extracted Summary

Chronic lymphocytic leukaemia (CLL) is often an indolent disease which may only produce symptoms and signs at an advanced stage. Spontaneous complete remission in CLL is a rare event. There have been few previous reports (Buchi et al., *Acta Haematologica* 70 (1983), 198-201 and Riber et al., *Blood Cells* 12 (1987), 471-483) and the mechanism for such remissions remains speculative.

It seems likely that spontaneous complete remission in CLL is achieved by an immunoregulatory effect, possibly through endogenous interferon, whose production may be provoked by viral infection. The authors report three cases of spontaneous complete remission in CLL. . . .

*Case 2: A 56-year-old woman presented in August, 1981 complaining of tiredness. Examination revealed multiple small lymph nodes in the right axilla. There were no other abnormal findings. The full blood count showed a hemoglobin concentration of 13 gm/dl. WBC 25.4 x 10<sup>9</sup>/l (67% small well-differentiated lymphocytes) and a platelet count of 282 x 10<sup>9</sup>/l. Tests of renal and liver function and chest x-ray were normal and viral studies were negative. At no time did the patient receive treatment for this condition. She was seen regularly, without receiving any treatment, until December, 1986, when it was first noted that her white cell count and differential were normal. Since then, over a period of 6 months, two further counts have also proved to be normal. The patient feels well and has no abnormal physical findings. Immunophenotyping of her peripheral blood lymphocytes shows a normal pattern with no evidence of clonality.*



## THERE ARE OTHER WAYS WE COULD DO THIS.

Nobody in the world manages health care the way we do. Billions of people watch our movies, import our technology, and aspire to our democratic ideals. Nobody imitates our way of managing health care — not one country.

If we look at other developed countries with impressive medical panoplies, we can see that half of every dollar we spend on health care is unnecessary. We spend more for health care than anyone else: more dollars per person, more of the wealth of the nation — any way you want to

measure it, more than any country in the world, more than any people in recorded history. We spend almost half again as much per person as Canada, the next most expensive country. How happy are we with the result? A recent worldwide poll of

the top forty developed nations asked this question. We were Number 40: Americans, who pay the most, were less satisfied with their health care system than anyone else in the developed world.

The statistics bear out our instincts. We are far from the longest-lived people in the world. Our infant mortality rates are shocking, and going up. Instances of preventable and treatable infectious diseases such as tuberculosis are increasing, not decreasing. Fully a third of our children arrive at kindergarten with health problems that limit their potential for learning. Health and wellness vary with class: the better off you are, the better off you are. Our emergency rooms are swamped with sore-throat and fever cases that have nowhere else to turn, and with life-threatening disease cases that would have been routine had they been caught earlier.

At the same time, increasing numbers of Americans have little or no health coverage. Millions of Americans live in fear that their coverage could be cut off by their employers or that they could be effec-

# SimHealthCare

## SIMULATING A HEALTH CARE SYSTEM THAT WORKS

BY JOE FLOWER

*Larry Brilliant (p. 58), Toni Martin (p. 68), and Patrizia DiLucchio (p. 88) have revealed some of the ways our health care system has stumbled into a fullblown health care crisis. Our next author is bold enough to jump off the edge of analysis into the stormy waters of prescription — how we might resolve the crisis by redesigning the system.*

*Joe Flower is the founder and director of The Change Project in Sausalito, just across the parking lot from WER. Flower writes and speaks about change: how it works, and how we can use it. He has focused on health care, "America's largest and most turbulent industry, as a laboratory of the forces of change, and as a system of change that affects every one of us in ways that are intimate, forceful, frightening and expensive."*

*Flower has written and spoken about change in health care for The Healthcare Forum Journal, Esquire, and Prevention. He coauthored Age Wave (Tarcher/Bantam, 1989), which detailed the deep changes American society is going through as its population ages, and wrote Prince of the Magic Kingdom: Michael Eisner and the Re-Making of Disney (John Wiley and Sons, 1991).*

—HLR





tively dumped by their insurer, or that their insurer may suddenly find them ineligible — and that health problems will cause them to become destitute. One in five Americans suffers “job lock” — a kind of postindustrial serfdom in which workers cannot change jobs because they can’t be sure they will get adequate health care benefits elsewhere, especially if they or someone in their family has America’s most dread disease: the “pre-existing condition” that effectively bars them from ever again joining a new health insurance program at a less than extortionate rate.

Yet the Clinton reforms, and all the other alternatives we read about in the paper, talk only about how to pay for the health care system, and how to give more people access to it. They do not offer ideas about how to rebuild it so that it serves our needs better and costs less. They make no attempt to rewrite the social contract about health, to use the power of individual responsibility for health, to tie health directly to the life of communities, or to redefine health beyond the mere absence of disease.

The fact is, we don’t have a “health care system.” We have a

hodgepodge, patchwork “health care industry” (that’s what the people who run it call it). This industry is:

- made of doctors’ offices, group practices, public health departments, government research institutes, integrated health systems, hospitals public and private, for-profit and not-for-profit, religious, community, teaching, university-connected, general and specialized;
- funded by patients, employers, health maintenance organizations, the government, and a plethora of insurance companies and pension programs;
- interconnected in an impossible welter of chains, buying consortia, and voluntary associations that compete, combine, spin off and reabsorb with confusing speed.

All of these have institutional and systemic goals and incentives that conflict and combine and influence one another — and few, if any, are truly focused on keeping everybody healthy.

We pay for most health care through employer insurance programs, and those programs are optional. This means that we ignore the homeless, the un-

employed and the underemployed — as if these people don’t have health problems, don’t enter the system, and don’t have to be paid for. But they do; they are called MIAs (medically indigent adults), and they clog the system, typically coming into emergency departments when their conditions have reached crises and become as hopeless and as expensive to treat as possible.

We usually pay only for acute care — treating people who are already sick — despite the fact that half of all the acute care for which we pay deals with preventable diseases. “Oh, yeah,” one prominent health futurist told me, “if you get somebody in Emergency in insulin shock, he’s a great customer — all kinds of work, as long as you can charge it to Medicaid or his insurer. Never mind that you could have prevented the whole thing with ten bucks’ worth of education. No one’s paying you the ten bucks for preventive education.”

Insanity has been defined as doing the same thing over and over, while expecting a different result. There must be a way we could try doing this thing differently.

## SIMHEALTHCARE

Have you ever played “SimCity”? This popular computer simulation game allows you to design and build a city, putting in factories, housing and freeways, preserving greenbelts, dealing with pollution, and so forth — you see at each step how one change affects all the rest.

We can do something like that with health care. As an exercise — to play with the possibilities — we

can start with bare ground and build what we would like. That’s what I’ve done. You can follow along, and ask yourself: what would you do, if you could build health care in America from the ground up?

I’ll start with the foundations: why health care doesn’t work now, what my assumptions are, and my criteria: how I would know if a system really worked.

CONTINUE

## WHY HEALTH CARE DOESN'T WORK NOW

In simple terms: we aren't paying anyone to keep us healthy. We are paying people to do procedures on us. We don't reward them — often we actually penalize them — for doing things that would keep us well.

It's not the fault of new technology: some systems here and around the world use the same technology at far lower cost. It's not the litigation-happy lawyers' fault: malpractice actually accounts for only about 1 percent of health care costs, and the overreaction to it only a bit more. It's not the greedy doctors' fault. It's not the insurance companies' fault. It's not anybody's fault. Every system does what its structure makes it do, and this one is no exception. This system is not structured to provide for the health of the American people. It is structured to make a lot of money for some people, and provide steady employment to a lot of people, by lavishing advanced, technology-intensive medical procedures on people who have the correct papers.

## ASSUMPTIONS

• *There is a lot of waste in the health care system.* At every turn, we hear talk of rationing in the future of health care. Yet we have not done the homework that would tell us what works, and what is waste, in medical care. Most procedures in most medical settings simply have never been rigorously examined for unnecessary costs — much less for whether they are needed in the first place.

When an entire procedure is found to be unnecessary, through controlled, reproducible studies published in peer-reviewed professional literature, the finding is routinely ignored if the procedure is a profitable one. For instance, repeated studies have shown that, of patients with coronary-artery trouble who face a recommendation of bypass surgery, fully two-thirds do not in fact need the surgery: a careful six-month program of diet and exercise will bring the condition under control and reverse the diagnosis. Yet the coronary bypass remains one of the most common types of major surgery, because surgery is usually "reimbursable." Hospitals and doctors are paid to think of themselves as being in the surgery business, not the diet-and-exercise business.

Furthermore, we spend an enormous amount of money — possibly as much as 25 cents of every health care dollar — simply trying to decide who pays for what, documenting every aspirin and bandage, and litigating over medical bills — all of which would disappear if one source paid for everything.

• *New methods of gathering clinical and financial information are making it possible to find out what works — and for what price.* In many cases, doctors in one area prescribe a given therapy, surgery or drug as much as ten times more often than doctors in other areas, with no evidence that they are getting better results. Robert Brook, M.D., of UCLA and the RAND Corporation, told *Healthcare Forum Journal* last year, "If the figures at the lower end of these ranges represent appropriate and adequate care, then 30 to 50 percent of the nation's health bill might be said to consist of expenditures on care that produces little or no demonstrable health benefit." Furthermore, not only are many bypasses and other popular surgeries unnecessary, up to a third of them



pose as big a risk to the patient as the condition they set out to correct. And up to a fourth of the time people spend in hospitals could just as well be spent at home.

New methods just beginning to be put into practice allow us to compare results. These "outcomes" measurements can compare individual practitioners, clinics, methods for treating a particular disease, even whole systems. "Clinical benchmarking" and other "outcomes management" tools show enormous potential for improving quality and dropping costs at the same time; they are just getting started in health care, against a great deal of resistance.

- ***In health care, doing it right is far cheaper.*** "Doing it right" means paying for prevention, education, and long-term, low-intensity, high-intimacy relationships with clients that catch disease early and correct the life trends that lead to disease. The agony of high costs will combine with new medical techniques (such as genetic assays) and new methods of information gathering to push us finally toward organizing a new kind of health care around promoting health and predicting and managing disease.

- ***Who makes money, and how much, is less important than what the money drives people to do.*** It is not obscene that doctors, health care executives, and insurance companies are doing well. It is obscene that they are doing well while the nation's health gets worse.

- ***We have more than enough health care, but it's terribly distributed.*** Far too many of our health care facilities and profes-

sionals are concentrated in the more affluent parts of major urban centers, and far too few in the poor side of town or out in the country. We have far too many specialists and far too few generalists. We have far too much acute, high-intensity capacity, and far too little chronic and preventive, low-intensity, high-intimacy capacity.

- ***People make pretty good decisions,*** given the right information from sources that they find credible.

- ***Good individual decisions do not always add up to good social decisions.*** For instance, I want no technology spared to keep me alive as long as possible, whatever the cost. But that doesn't work for the society as a whole. Some decisions are more appropriately made by the neighborhood, the region, or the society.

- ***An ideal system must be built around the health of the population, not around the desires of the professionals who run it.*** Many doctors prefer to operate alone, and to be paid "fee-for-service." Many hospital executives and boards like to build new buildings and add new programs. Such desires are relevant to the politics and the management problems of real systems, but not to the design of the best system possible.

- ***The biggest factors that affect our health are not medical.*** They fall outside of the major medical acts of diagnosing, prescribing pharmaceuticals, and performing surgery. Rather, they involve decisions about (among other things) diet and exercise, where we work, where we live, what we think, with whom we have sex and in what manner. Of the factors that are strictly medical, many are not about fighting dis-

ease, but about preventing it. These include prenatal checkups, well-child checkups, immunizations, and regular exams for older people; this part of medical practice is growing rapidly: changes in technology allow us to catch disease earlier, and sometimes prevent it entirely. Of the medical procedures that fight disease, many are long-term and low-intensity, such as those used to control diabetes, high blood pressure or hormone imbalance. Yet a disproportionate amount of our health care dollar is spent on procedures used in high-intensity, acute medical situations — and many preventive procedures are not covered at all.

- ***The ownership, management, and relationship of facilities are relatively fluid.*** It takes time to build a medical practice, a hospital, a convalescent home, a freestanding surgical center, or a home care business. It takes less time to put them together into an integrated system, or to shift them from one system to another. To bind them into a system, you don't necessarily have to own them.

- ***Health care in America is headed for major turmoil no matter what we do.*** Not upsetting the apple cart is no longer an option. Even without any effect from the Clinton reforms, health care in America is entering the most turbulent decade in its history. Just one example will serve to illustrate the magnitude of the changes engulfing the industry: ten years ago there were roughly 7,500 hospitals in America. Today there are about 5,500. According to health futurist Jeff Goldsmith, by the year 2000 we can expect no more than 2,000 to 2,500 to survive.

CONTINUE



## CRITERIA

Everyone has their own list of what would mark a system that really works. I believe that a system that works will have:

- much lower costs;
- universal coverage;
- individual freedom of choice;
- wide coverage (including medical, pharmaceutical, dental, preventive, wellness, auditory, and optometric care);
- real and powerful preventive measures;
- local control, to insure that the system serves Gallup, New Mexico, differently than it does Palo Alto, California;
- higher quality;
- no tie to employment (except that employers must pay any increased health care costs generated by hazardous working conditions);
- no need for separate systems for the elderly (Medicare), the poor (Medicaid), or people injured on the job (the medical side of Worker's Compensation).

Finally, a system that works will do all these things naturally and easily: they will be driven by the natural constraints of the system. Water plunges over a waterfall because it's impossible for it to do anything else. You don't have to pump it. Cost caps and managed care are like pumps — they move some of the water where you want it, but they take a lot of energy, they leak, and sometimes they break. Waterfalls don't break. In a well-designed system, things happen because they are easy, not because you make them happen.

## HOW DO WE MAKE IT HAPPEN?

Okay, here we go. Given my assumptions and criteria, here is what I came up with when I ran the "SimHealthCare" game in my head: a system that pays for health care with money collected through the federal tax system but administered by local boards. The deliverers of health care are not individual doctors and hospitals, but integrated health systems that include all kinds of health services, from primary-care physicians to surgery to optometrists. The principles are: cover everyone, give people control, and arrange the incentives to achieve the highest level of health at the lowest price.

- *Cover everyone, automatically.* Not only does this make ethical sense, in the long run — in a system that works — it's actually cheaper.
- *Pay for it with a federal health tax.* Base the tax on income, but increase it (rather than decrease it) for each extra dependent. Employers may pay the tax for their employees as part of a benefits package. Employers with hazardous working conditions must kick in extra.
- *Spend the money through locally elected health boards.* Each year, each local board calls for bids from integrated health systems to provide health care for the area for a fixed price. The area, rather than the doctor, becomes the "customer" of health care.
- *Give each local board a clear incentive to get the highest quality for the lowest price.* Base each board's budget on the average spent per person over the previous year in areas with a similar "health quotient" across the country. (High-crime areas, or areas with a lot of frail old people, for instance, would have a different quotient than areas crowded with young, affluent singles). If the local board can beat that average (if it can get a contract for less than what the federal government has given it) it gets to keep the difference to use on health-related activities. If it can't beat the average (if it lets a contract for more than the federal government has given it) it will not get more from the government. Instead, it will have to tax its constituents to make up the difference. If the people on the board want to stay on the board, if they don't want their neighbors camped on the front lawn with picket signs, and if they would like a nice budget to spend on health education, exercise courses and tennis courts, they will try very hard to find a low bid. As boards continue to do this, year after year, the average will level off and begin to ratchet down.
- *Keep each board's geographic area small, far smaller*

than the normal "catchment area" of an integrated health care system. The natural size of an integrated system is about the size of a metropolitan area, or somewhat smaller (this is dictated by the distances people feel comfortable driving to get to a local clinic or doctor, or to a major medical center for more serious matters). If one board let one contract for an entire metropolitan area, then a single health care system would grow up to serve that contract. All hospitals and group practices in the area would have to join the system that had the contract. Competition would be eliminated, and in the future the board would have to pay whatever price the system asked. But when each local board represents a neighborhood or district, an area with a population between 10,000 and 100,000 people, a metropolitan area will support two, three, or more competing systems that continually try to woo different neighborhoods with lower costs and higher quality. Small scale also means that the whole process builds community: we make vital decisions with our neighbors, not by lobbying some faceless board downtown. Furthermore, this turns out in many cases to be an effective scale on which to address such vectors of health problems as family violence, crime, alcoholism, illegal drugs, and local environmental problems.

• **Tie profit to improvement in the population's health.** With the basic contract, the health care systems already have the potential for making money by nurturing the health of the population. If everyone involved in health care is getting paid through

yearly flat fees, then the healthier the population is, the more money they make. This means educating people about their health, screening people to catch diseases early, seeking out disease factors (such as malnutrition, old lead-based paint, and unsafe sex practices) and experimenting continually with ways to eliminate them — not as a matter of corporate charity or good public relations, but because it directly affects the bottom line. Exaggerate this feedback effect by building into each contract a sizable bonus incentive based on changes in the health of the population. Establish a baseline health profile for each area, measure it every year, and pay the system a large bonus for improvements. Make adjustments for demographic shifts (e.g., if a large convalescent home is built in the area, adjust the health profile to compensate for the influx of frail elderly people). Make the bonus at least large enough to make the difference between profit and loss. Specify that a significant portion of the bonus be built directly into the compensation for the medical professionals and decisionmakers in the system: if the health of the population improves, they make a lot more money. If it deteriorates, the system loses money, and the people who work for it get paid much less. Base a part of every specialist's pay on the quality of the population's health in the area of their expertise. Pay ophthalmologists, for instance, based not only on performing surgeries a certain number of hours each week, but also on whether the sight of the population gets better or worse.

This strategy helps to redistribute health care: it becomes more prof-

itable to operate in areas where the population's health is worse, because those areas have the most potential for improvement.

• **Let individuals go wherever they wish for care.** Don't restrict people to the system that won the contract for their area. If they go to another system's facility because it is more convenient, or better in some other way, their "home" system should have to pay the other system for their care. This gives the "home" system a large and continual incentive to provide care that is deep, wide, and ongoing, so that people will have little encouragement to stray to other systems, but at the same time gives access to all medical facilities, should a problem arise that cannot best be cared for by the home system. Limit the other system's charge to the "home" system to what it costs to provide the same service to its own clients. Further, limit outside, nonsystem providers to what it costs the "home" system to provide the same service to its own clients.

• **Allow boards to form and manage their own systems, if there is not enough competition.** Local competition is essential if the system is to work. If it is not there, the boards can invite it or invent it.

• **Build a powerful, useful information system.** Make it a multi-level, multiuse system that will

1) allow health care providers to easily track "best practices" and to tell when they are doing well or poorly, both clinically and financially;

2) allow local boards (who would not have to be health care experts) to

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compare the outcomes of the systems competing for their business;

3) allow citizens to carry their entire medical histories on interactive cards, in case they wish or need to get treatment away from their usual clinic;

4) allow citizens the maximum amount of health information, tailored to their own conditions, in their homes;

5) allow sophisticated diagnoses in the home or workplace.



## FINALLY

Why isn't anybody doing this in real life? They are. Outside the glare of the TV lights, some people — academics, futurists, and health care executives — have been looking for a new blueprint for health care in America. Most people have never heard of these alternatives. They have not yet entered the public discussion. These include:

- the Interact Healthcare Consortium at the Institute for Interactive Management, the creation of Russell Ackoff, the 73-year-old powerfully radical thinker of the Wharton School,
- the Belmont Vision, from the Institute for Alternative Futures and its executive director Clem Bezold in Alexandria, Virginia, and

## QUESTIONS

Why base the system on geographical areas, rather than on employers? Because many of the factors of health are matters of environment and community. It doesn't make sense to tie the profit of large systems to the change in the health of thousands of people scattered across the map — the systems would have no way of affecting the lives of only their own clients. This system galvanizes communities to work together on factors that affect health, and gives health care systems huge incentives to help the communities in that work.

Is it neat? No, it is messy. Neat, simple systems rarely work. This system is based on an ongoing local discussion of how to stay healthy at the lowest price — but the people doing the discussing have their hands on the tools needed to make it happen. Such processes tend to be messy, and noisy, and can be personal, but they work far better than decisions made by well-meaning experts who don't live there.

On the other hand, our current system is not only far more messy, it is also cruel, autocratic, mystifying, and expensive beyond all our nightmares.

Is it weird? No. You want weird, look at the way we do it now.

Will it work instantly? No. Most good systemic solutions make the symptoms of the problem worse at first. Under this system, health care costs will probably continue to rise at first, and so will confusion. Over the years, though, costs will fall and clarity will rise in a continuing, self-driven fashion.

What will happen to the doctors? Most would be forced, not by statute but by the market, to join large, multispecialty practices — to work in teams, rather than alone. And they would no longer be the "customers" of health care: the citizens would. However, both of these shifts will occur under almost every future scenario for health care — and they are already happening.

Will the health insurance industry

disappear? No, but it will scale back considerably. Its main business will be providing "supplementary" insurance for people who want a higher level of care and are willing to pay for it.

Will it cost people their jobs? Yes. Over time, hopefully, a lot of them. That's what much of the \$1 trillion per year we are now paying goes to — armies of people doing unnecessary procedures, shuffling paper, arguing over who pays for what, processing the paperwork on unnecessary tests, evaluating claims, tracking expenses. If we want to save money, we need to shrink the industry, and put those people to work doing more productive things.

Is this the only system that will work? Not at all. We can connect the loops in a number of ways, bringing home the feedback that will turn our health care industry into a health care system. Some have more promise than others, but any of them would work better than what we are doing now.

- the national and local proposals of health care futurist Leland Kaiser, of Kaiser and Associates, Brighton, Colorado.

These visions are large-scale efforts to do something like what I have described here. In fact, in playing my "SimHealthCare" game, I used a number of elements of these different visions. They have a common flavor: they close the feedback loops in our current system. They get outside the walls of our assumptions and beliefs to try on truly different possibilities.

What makes them different from our game here is very important: each of these has been developed by people and institutions that have some power to put what they envision into effect. Health care is undergoing vast changes, and somewhere in these new blueprints is an image of its future. ☺

Visions for the future of health care that are at once large and knowledgeable are scarce. Given the complexity of health care in our country, that's not surprising. But at least three organizations are taking a serious swing at it:

**The Interact Healthcare Consortium:**  
**INTERACT** — Institute for Interactive Management, 401 City Avenue/Suite 525, Bala Cynwyd, PA 19004; 215/660-9200. Russell Ackoff, Chairman of the Board.

**The Institute for Alternative Futures:**  
 108 N. Alfred Street, Alexandria, VA 22314-3011; 703/684-5880, Clem Bezold, Executive Director.

**Kaiser and Associates:** Box 339, Brighton, CO 80601; 303/659-8814, Leland Kaiser, President.

## SchoolStat

How can you establish that Group A is significantly different from Group Z? Statistics. My statistics teacher pounded in two things — 1) have a trained, tough-minded statistician check the research plan before starting to collect numbers; 2) agonize over the numbers.

SchoolStat is a teaching tool robust enough to crunch real numbers — up to 30 groups with 1,000 data points each. For comparing experimental results or observational groups — fertilizers, direct-mail lists, or medical treatments — it's a wonderfully affordable tool. —Hank Roberts

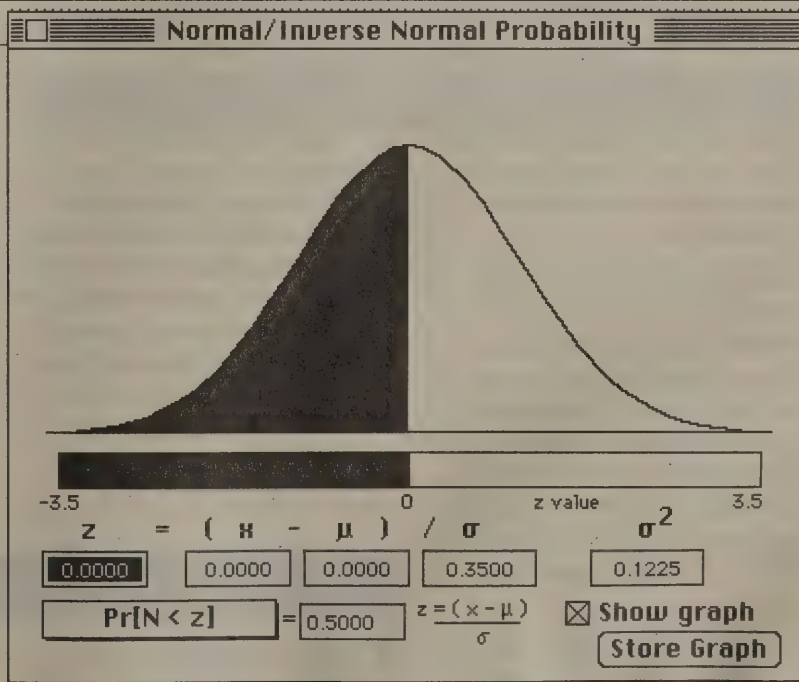
### SchoolStat

Version 1.0.7.

For Mac Plus and subsequent models.

**\$25** (shareware) from Dr. David Darby, Behavioral/Neurology Dept., Beth Israel Hospital, 330 Brookline Avenue, Boston, MA 02215; email ddarby@bih.harvard.edu

In the figure above, the dialog box displayed illustrates some of these relationships. The z editable field is hilited, so that any typing will affect this text box only. You can use the Tab key to move to the next editable text box, or click in one with



the mouse directly. You can also alter the z value interactively by dragging on the sliding control at the top of the dialog box. The z, x and probability values will update simultaneously. Note that the limits of the sliding control are preset to be approxi-

mately 3.5 standard deviations from the mean. The shadowed box with Pr[N < z] on it specifies the probability (0.9463) which has been calculated, and is a pop up button with other possibilities for computing the area under the normal curve.

# Homeopathic Medicine: A Modern View

**F**OR ONE HUNDRED YEARS, leading physiologists and physicians have suggested that symptoms of illness do not simply represent something wrong with the sick person, but rather are adaptations of the body to stress or infection. Claude Bernard, the father of experimental physiology, acknowledged the impressive homeostatic tendency of the human organism.<sup>1</sup> Walter B. Cannon, author of the seminal book *The Wisdom of the Body*, recognized the importance of the body's inherent intelligence.<sup>2</sup> Hans Selye, the father of modern stress theory, asserted, "Disease is not mere surrender to attack, but also the fight for health; unless there is a fight, there is no disease. Disease is not just suffering, but a fight to maintain the homeostatic balance of our tissues."<sup>3</sup>

Systems theory forms the basis for understanding symptoms as defenses. It assumes an interconnectedness of all things — that systems are intrinsically dynamic, that equilibrium is stagnation and death, and that a system has inherent self-organizing properties once it achieves a certain level of complexity.

An organism responds in at least two ways to a given stress — with general adaptive capabilities, and with a creative tendency to transcend unsuccessful defenses and develop new, potentially more effective means of reducing the pathogenicity of a stress. The system seeks to create a new level of order through fluctuation.

"Order through fluctuation" is a common description in physics of how systems adapt to change.<sup>4</sup> Yet few scientists or physicians have considered that the body creates symptoms as a way to achieve a new level of dynamic homeostasis.

From this perspective, a symptom does not necessarily represent the

organism's collapse due to a stress or infection. Rather, a symptom is an adaptive reaction of the organism — the best possible response the organism can make based upon its present resources. For instance, it is widely recognized that a cough is the body's effort to clear the bronchia, that inflammation is a manifestation of the body's effort to wall off and burn out invading foreign bodies, and that fever is the body's way to create an internal environment that is less conducive to bacterial or viral growth. Such are the body's impressive self-organizing, self-regulating, self-healing efforts.

## Going with, not against, the body's defenses

**W**ith this understanding, the homeopathic law of similars is completely logical. Instead of suppressing symptoms — which would inhibit the organism's inherent defensive reaction — a homeopathic medicine is prescribed for its ability to mimic those symptoms.

The best way to heal ourselves of disease may be to steer our body's own defenses into, rather than away from or against, symptoms. By aiding the body's efforts to adapt to stress or infection, the organism is best able to heal itself. Stewart Brand's description of

BY DANA ULLMAN

*Dana Ullman, M.P.H. (UC Berkeley), wrote Discovering Homeopathy (North Atlantic, 1991) and Homeopathic Medicine for Children and Infants (Jeremy Tarcher, 1992), and co-authored Everybody's Guide to Homeopathic Medicines (Jeremy Tarcher, 1991). He is the director of Homeopathic Educational Services and the president of the Foundation for Homeopathic Education and Research (both in Berkeley, California).*

*Dana recently formulated a line of homeopathic medicines called Medicine From Nature. For access to homeopathic books, tapes, medicines, and microdosage software for homeopathic practitioners, write to his business: Homeopathic Educational Services, 2124 Kittredge St., Berkeley, CA 94704. —Richard Nilsen*

homeopathy as “medical aikido” is an apt one.

Belladonna, commonly known as deadly nightshade, is a commonly prescribed homeopathic medicine for high fevers, since it has the ability to cause them. Of course, numerous other substances also cause high fevers. The science and the art of homeopathic medicine is to find the substance from the plant, mineral, or animal kingdom with the ability to mimic most closely the sick person’s pattern of symptoms.

Since fever is a healthy defensive response of the body, except at extremely high degrees, it makes sense to use medications that augment the body’s defenses, rather than drugs that suppress them.

Immunization and allergy treatments, two of the very few conventional therapies that seek to stimulate the body’s own healing reaction, have the homeopathic law of similars as their basis. Immunology pioneer Adolph Emil Von Behring acknowledged this directly in 1906.<sup>5</sup> Other applications of the law of similars in conventional medicine include the use of radiation in the treatment of cancer (radiation is known to cause cancer), Ritalin (an amphetamine-like drug) in the treatment of hyperactive children, and nitroglycerin in the treatment of heart conditions.

Although these conventional medical treatments are ultimately based on the law of similars, they should not be considered homeopathic medicines for two basic reasons: 1) medicines are not prepared in the pharmacological procedure of dilution and succussion common to homeopathic medicines; 2) medicines are not individually prescribed in the microdosages common to homeopathic practice.

A homeopathic medicine is not prescribed for a specific disease per se, but for the pattern of symptoms that it is known to cause in overdose when given to healthy

people. The concept of a pattern, or syndrome, of symptoms is an integral part of homeopathic care; it embodies the concept of looking at symptoms in the context of the whole. The challenge to the person prescribing homeopathic medicines is to individualize drug prescription.

Homeopathic medicines are made through a process called “potentization,” or serial dilution. For example, the tincture of belladonna is diluted 1:10 or 1:100 in distilled water and then vigorously shaken (succussed), diluted again and shaken, diluted and shaken. Dilut-

ed 1:10 three times, it is called 3x (X being the Roman numeral 10); diluted 1:100 three times, it is called 3c.

Modern principles of chemistry and physics estimate that there should be, in all probability, no molecules remaining once a substance is diluted 1:10 twenty-four times or 1:100 twelve times. Yet homeopaths commonly use medicines at 30x, 200x, 1,000x, or more. The more a medicine is potentized, the deeper it acts, the longer it acts, and the fewer doses are needed.

Homeopathy’s use of small doses has become its most controversial principle.

*A symptom is an adaptive reaction of the organism  
— the best possible response the organism can  
make based upon its present resources.*

#### Evidence for the microdose phenomenon

The *British Medical Journal* recently published an eight-page review of twenty-five years of clinical research on homeopathy. This meta-analysis was commissioned by the Dutch government in response to an earlier study indicating that 45 percent of Dutch physicians consider homeopathic medicines to be effective. The meta-analysis covered 107 controlled clinical trials, 81 of which showed the efficacy of homeopathic medicines. The researchers’ evaluation of these experiments determined that 21 studies were of a particularly high quality in terms of their research design and the number of subjects used. Fifteen of these studies confirmed the efficacy of homeopathic medicines. These trials indicated the range of successes that homeopaths commonly observe, including the effective

treatment of arthritis, migraine headaches, allergies and hay fever, influenza, respiratory infections, postoperative infections, injuries, and childbirth complications.

The researchers concluded, “The amount of positive evidence even among the best studies came as a surprise to us. . . . The evidence presented in this review would probably be sufficient for establishing homeopathy as a regular treatment for certain conditions.”<sup>6</sup>

This review of research created surprisingly little controversy, probably because the evidence was so strong. But research supporting homeopathy and homeopathic microdoses has not always been so quietly accepted.

In 1988, a *Nature* article by a re-

spected French immunologist created a whirlwind of controversy.<sup>7</sup> A study, replicated seventy times, in six laboratories, at four universities, showed that microdoses of an antigen diluted 1:10 up to 120 times had a significant effect on white blood cells called basophils.

*Nature* editor John Maddox, magician and self-employed fraud detector James Randi, and NIH researcher Walter Stewart visited the lab that originated the research.<sup>8</sup> Although this lab and others had worked on the research for five years, the *Nature* team declared the original research false after two days of study.

The press never reported on some crucial specifics of *Nature's* study. The magazine conducted four trials: the first time, the experiment worked just as the original researchers had predicted; the next three times, however, the experiment did not show any effect of the microdose on the basophils. The press only reported the three negative outcomes.

When a more stringently controlled trial was later completed, the press ignored it, with the exception of *New Scientist*, which reported favorably on it.<sup>9</sup> This new experiment was published in the *Journal of the French Academy of Science*.<sup>10</sup> An important new feature of this experiment was that the researchers first tested the blood samples to make certain they were sensitive to crude doses of an antigen. Because this experiment was testing allergy hypersensitivity to a specific substance, and because not all blood samples will show this sensitivity to regular crude doses, this additional feature was essential to the experiment. As it turned out, 39 percent of those blood samples that had sensitivity to crude doses responded to homeopathic doses of an antigen; 0 percent of the control group responded.

No member of the debunking team was an immunologist; perhaps they

didn't know that many immunology and allergy experiments do not work 100 percent or even 50 percent of the time, and yet may still represent important biological effects. The experiments that supposedly debunked the original research show successful results in one of four trials; this suggests that more trials should have been conducted to give the experiment a proper scientific evaluation.

In 1980, a double-blind study of patients with rheumatoid arthritis showed that 82 percent of those who had been given an individually chosen homeopathic medicine experienced some relief of symptoms, while only 21 percent of those who had been given a placebo experienced a similar degree of improvement.<sup>11</sup>

There are also dozens of laboratory experiments.<sup>12</sup> A study published in *Human Toxicology* replicated earlier work showing that homeopathic doses of arsenic helped rats excrete the crude doses they had been given earlier.<sup>13</sup> The implications

are significant, considering the environmental toxicity that humans and animals commonly experience today.

Other well-controlled studies include the 1942 research conducted by Scottish physician W.E. Boyd, using enzyme diastase in starch hydrolysis.<sup>14</sup> He showed that hydrolysis was accelerated using the enzyme inhibitor mercuric chloride at 61x, while hydrolysis was inhibited at lower potencies. This work was done so meticulously that it was strongly praised by an associate dean of an American medical school.

L. M. Singh and G. Gupta demonstrated antiviral action in eight of ten homeopathic medicines tested on chicken embryo virus.<sup>15</sup> Inhibition between 50 percent and 100 percent was common for these drugs. A similar test of four medicines on Similike Forest Virus (a virus that causes paralysis in mice) showed that none had any observable effect as compared with the control.

*One of the basic assumptions of chaos theory is that minute changes can have huge effects.*

### **Resonance, chaos theory, and the microdose phenomenon**

Just as pharmacologists do not understand the mechanisms of many conventional drugs, we presently do not understand how homeopathic medicines work. Still, drawing upon research in various fields, and by analogy, we can begin to theorize how these medicines may work.

All matter consists of, stores, and radiates energy. Some substances (such as radium) radiate a great deal. Water, the substance in which

most homeopathic medicines are made, also stores wavelengths.

All things produce their own wavelengths, and like a snowflake, each substance is unique. Researchers have discovered that snow crystals, after melting, resume their previous form when they are frozen again. Not only does water store wave lengths, it stores some form of memory.

Some homeopathic researchers



theorize that the double-distilled water used in the preparation of homeopathic medicines maintains the memory of the substance diluted in it — even when repeated dilutions of 1:10 or 1:100 have exceeded the point at which, in all probability, no molecules should remain.

Macroscopic changes can occur in living organisms when specific key enzymes, hormones, or tissues are activated, even if only slightly. Modern chaos theory supports this observation. In fact, one of the basic assumptions of chaos theory is that minute changes can have huge effects.

Extremely small doses of substances may be able to sift through the blood-brain barrier (which normally impedes potentially dangerous molecules from entering the brain); perhaps homeopathic medicines are able to affect brain chemistry, and thereby disease, in significant ways.

An article in *Gastroenterology*<sup>16</sup> suggests that small doses may be more effective than large doses because of a “therapeutic window.” This is more likely when an organism is in a state of “metastable excitation,” in which the organism is “cocked and ready” when a specific stimulus triggers an avalanche effect. The homeopathic law of similars may be the vital link to finding a substance in nature which, when individually prescribed, can trigger this avalanche effect.

Science writer K. C. Cole observes, “Planets and atoms and almost everything in between vibrate at one or more natural frequencies. When something else nudges them periodically at one of those frequencies, resonance results.”<sup>17</sup> Cole goes on to say that the power of resonance is in pushing or pulling in the same direction that the force is already going. A synchrony of small pushes can add up to create a significant change. A classic example of the force of resonance is the phenom-

enon of soldiers marching in formation over a bridge, and causing it to collapse from the natural resonance they create.

Resonance is more powerful when there is a little friction — when the resonant force is similar to, but not exactly the same as, the initial force. The resonance becomes broader, creating something similar to a chord rather than a single note. Homeopaths find that the most effective homeopathic medicine is one that is the most similar to — not the same as — the symptoms the person is experiencing.

This phenomenon of similars is not only observed in medicine; researchers at Southampton University have found that machinery noise can be silenced by noise from another source that closely, but not exactly, mimics the original noise.

Although the precise mechanism is not yet known, and although it may not be a single or knowable mechanism, researchers at the California Institute of Technology recently

made a discovery that may shed some light on homeopathic phenomena. The researchers found magnetic particles, called magnetite, throughout the human brain.<sup>18</sup> Although the purpose and function of magnetite remain unknown, its discovery establishes the existence of an electromagnetic component of the brain. Ultimately, this may help explain the effects of submolecular doses used in homeopathy.

One metaphor that may provide additional insight into homeopathic microdoses derives from holographic theory. Holograms are high-resolution, laser-created photographs that look three-dimensional. If a hologram of (for example) a tree is broken into pieces, each piece retains a picture of the whole tree, albeit a smaller and less clear picture.

A homeopathic medicine may be like a hologram. No matter how many times a substance is diluted, a smaller but complete essence of the substance remains.

*Since fever is a healthy defensive response of the body, except at extremely high degrees, it makes sense to use medications that augment the body's defenses, rather than drugs that suppress them.*

#### Examples from nature

It is widely accepted that the human organism is much more sensitive to small doses of certain substances than had been previously recognized. This is observed in people who are allergic to pollen, to certain foods, and to various other substances. Some people, for instance, are so allergic to cats

that they immediately develop symptoms upon entering a room a cat has visited in the past week. They develop the symptoms simply from breathing in exceedingly small amounts of cat hair in the air.

Sensitivity to microdoses is also observed by scientists who have

found significant effects of pheromones — sexual attractant hormones emitted by various organisms. Certain insects are known to sense as little as a single molecule of a pheromone. Since scientists are presently unable to measure anything less than a molecule, one wonders if insects may even sense submolecular energetic fields.

Interestingly, pheromones from a given organism seem effective only within that organism's species — another example of hypersensitivity related to the similars phenomenon.

The law of similars seems to have a regenerative effect. This may be observed in a physics experiment with magnets that many of us may have performed as children. We know that the north pole of a magnet is attracted to another magnet's south pole, and that its north pole repels another magnet's north pole. A weakened magnet's north pole is regenerated when another magnet's north pole is placed next to it. "Like poles regenerate like poles" is a basic principle of electromagnetic physics.

*It is widely accepted that the human organism is much more sensitive to small doses of certain substances than had been previously recognized.*

### Medicine in the twenty-first century

This theoretical framework for how the homeopathic medicines work may seem sound (or at least intriguing) to some people, and ludicrous (or at least incomplete) to others. One must remember that theories are only theories; they neither prove nor disprove anything; they simply attempt to explain how and why something works. Evidence that disproves a theory of gravity, for instance, does not mean that gravity ceases to exist; it only means that the theory was incorrect.

Ultimately, understanding how homeopathic medicines work will not only be invaluable in perfecting their prescription, but — more significantly — in learning about life, health, and the laws of nature more deeply — ultimately having a profound effect on how we understand ourselves, each other, and our planet.

The homeopathic law of similars is an ancient wisdom. Hippocrates made direct reference to it. The Oracle at Delphi proclaimed, "That which makes sick shall heal." Paracelsus, the fifteenth-century physician and alchemist, formulated the "Doctrine of Signatures." Even Shakespeare (in *Romeo and Juliet*) and Goethe (in *Faust*) integrated this ancient wisdom into their writings.

Aiding, rather than suppressing, the body's wisdom is a timeless concept. Stimulating immune and defense responses, rather than controlling or manipulating symptoms, is an essential step forward in medicine and pharmacology. This is the direction in which these fields need to go, and this is the direction in which homeopathy can take us. ☺

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## American Ground Zero

During the fifties and sixties, the US government exposed up to half a million troops and thousands of its patriotic, unsuspecting citizens to levels of radiation that produced epidemics of acute radiation sickness, cancer, and leukemia.

These poor people have been unable to claim compensation for their diseases, and have consistently and wickedly been lied to by their government. Nazi Germany and the former Soviet Union behaved in a similar manner toward their citizens. But never did I imagine that the self-proclaimed free, moral government of the USA would behave in the same way.

Carole Gallagher has brilliantly portrayed, by photographs and moving personal anecdotes, the medical histories and experiences of these lovely innocent Americans.

This book should represent a turning point in the history of the atomic age in the USA. It brings to mind yet again the Einstein quote: "The splitting of the atom changed everything except man's mode of thinking; thus we shift toward unparalleled catastrophe."

*American Ground Zero* is one of the most important books of this decade.  
—Helen Caldicott

■ As we got closer to Cedar City, we noticed the ewes were aborting their lambs, miscarrying. We didn't know why, we just started to notice it. Then we got in and had them sheared, and we had about 700 or 800 yearling ewes that wouldn't have lambs, you know. And the little lambs started to die. And one day Ashton came down and said, "Gal, you better come down and look at your sheep — there are a lot of yearlings dying." I went down there, and the ewes were dying out in his field. My dad was beside himself because so many sheep died, most of our lambs and a fourth of our ewes. We trailed them to the mountain and we took our cattle truck to pick up the sheep that couldn't go. We had just all we could take, and all those sheep we picked up that day died.

We dumped them out in a pile. The AEC came to that pile of bones later. The scientists came to investigate after we decided it was something really wrong and other



**"It's been proven what this radiation can do. No amount is safe to any human being. His tongue swelled out so badly before he died so that it burst out of his mouth and covered his nose. It was a horrible sight. Nobody could stand to look at him. I think the government killed my husband and ruined my life."**—Ruby Davis, June 1986, Las Vegas, Nevada

ranchers who had been out in Nevada close to where we were, their sheep were dying too. We got the county agent [Stephen Brower] and the vet [Dr. A. C. Johnson]. Those sheep had burns on their faces and on their lips where they had been eating the grass, and blisters on the ears, on the nose. I noticed that out in Nevada before we started to come in. The black sheep had white spots come in the black wool where the fallout would land on their back. We had a black horse, black as coal, and pretty soon he started to have white spots on his back. They took the geiger counter and put it down on these sheep and that needle would come over there and hit that post. I remember the guy saying, "Is it hot?" and the other guy would say, "Is it HOT? It's so hot this needle just about jumped the pole!" This was months after they died and he put the counter by that pile of bones. . .

*What happened to the wool?*

We sheared it, sometimes you could pull it right off the sheep, but we sold that wool. We had no idea. Those lambs went to market too, in the fall. I don't know who ate them but somebody did, I guess.

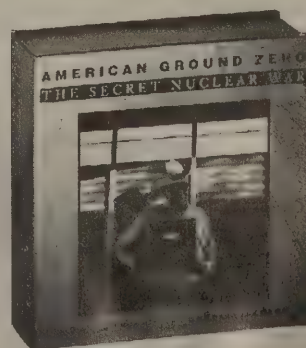
■ I kept on having to brush my arms off because these little gritty things had fallen on

me and the wind was blowing. [They were] kind of gray, and some were red. It had a lot of gray things in it. So it wasn't like a normal wind. It was different, and I noticed those little gray things right away because it was so unusual.

The clouds [of fallout] were coming over within a short time after I started writing. Just gray clouds. Then this wind kept blowing up a storm. I was there until ten o'clock, from five until ten. It came fast, like the wind was driving the clouds. It was a hot wind, it was awfully awfully hot and I was getting sunburned, I thought. I went straight home, and I don't remember whether that was the day or not, but one day when I came into town someone had taken geiger counter readings of the car.

They pulled my car over and rinsed it off. I went home. I went to comb my hair, and this is why I remember this experience so well, because when I went to comb my hair, my scalp started to lift up. It was just really scary. I had to peel it up through my hair. . . .

When I was having babies I was having problems with my teeth, but when the doctor pulled one of them, it didn't have any cavities, so he couldn't figure out why it was bothering me so much. He cut it in two, and the inside was all gone. Nothing was inside the tooth. So he pulled the others and every one was completely hollow. They didn't have blood or anything in them.



### **American Ground Zero** (The Secret Nuclear War)

Carole Gallagher, 1993; 462 pp.  
ISBN 0-262-07146-0

**\$50** (\$53 postpaid) from The MIT Press/Order Dept., 55 Hayward Street, Cambridge, MA 02142; 800/356-0343

## The Sourcebook for Sustainable Design

This sourcebook of environmentally least-despicable building materials and hardware is by far the best and most useful I've ever seen. Among the many categories are composting toilets, wood substitutes, pipe and brick made of recycled materials, and unusual insulation — described, not merely listed. Each category is led by a brief discussion of the environmental aspects involved, plus the information you need to make, defend and order good choices. There's a section on organizations and periodicals. Like our **Whole Earth Catalogs**, the **Sourcebook** gains credibility by pointing to, but not selling. It is not excessive to say that all architects, designers, specifiers, contractors and students thereof need a copy of this remarkable sourcebook. Ignorance is no longer an excuse for doing things the old, wasteful way. —J. Baldwin

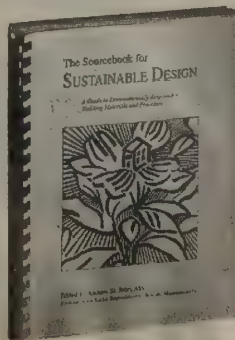
Wood is one of the oldest and most versatile of building materials, and continues to play a major part in almost every building project. Properly managed as a renewable resource, it should continue to be a basic construction material indefinitely. Guidelines for ensuring that this will be the case include the following:

1. Find alternatives to old-growth timber for all wood uses.
2. Use woods whose origins are known to be "sustainable" or "well-managed."
3. If a client demands rarer woods, use veneers instead of solid wood. Veneers provide more effective use of the whole tree, and the substrate can be made from sawmill scrap or waste (see 1 above).
4. Write for a subscription to *Wood Report* to Earth Access, 87 Cherry Street, Cambridge, MA 02139
5. If formaldehyde emissions are a strong consideration, specify low-emitting UF-bonded panel products or phenol-bonded products.

### The Sourcebook for Sustainable Design

Andrew St. John,  
Editor. 1992;  
140 pp.

\$25 (\$28 postpaid) from  
Boston Society of Architects,  
52 Broad Street, Boston, MA 02109;  
617/951-1433, x222



Product Name Section Number Section Name	Manufacturer / Distributor	TRADE NAME / Description / Notes  Source/Suggested by
Drains  02700	Phoenix Scientific Industries Suite B9, 3620 N High St Columbus OH 43214	PHOENIX BRICK, Drain tile and other clay products made from Fly ash reclaimed from pollution control scrubbers of municipal solid waste incinerators.
Sewerage and Drainage	PHONE ( 614 ) 267 0100	
Lumber made from recycled plastics  06500	Eaglebrook Products, Inc 2650 W. Roosevelt Rd Chicago IL 60608	DURAWOOD plastic lumber consists of high density (HDPE) with UV-inhibiting pigment systems. Claims over 90% recycled post-consumer waste. Makes landscape ties, site furnishings, etc.
Structural Plastics	PHONE ( 312 ) 638-0033 FAX ( ) 638-2567	

## Retiring Old Cars

When you hear someone start a sentence with "All we have to do is . . .", the next words will be lies, hype, or naive. There is no all-we-gotta-do; nothing is that simple. Simplistic views lead to extreme positions, confrontations, and consequent paralysis. This book is an instructive example of the complexities in implementing a straightforward, apparently useful concept: clean up the air and save fuel, at the least cost, by buying and scrapping severely polluting older automobiles. Read it and weep. Then get to work. —J. Baldwin

We note also that an early retirement program could have strongly negative impacts on auto recyclers and spare parts dealers, by absorbing the source of their materials, and on repair shops and used car dealers. In the Unocal program, the cars were crushed on the spot, and no stripping of the car was allowed. This, of course, need not be the case, and program designers might decide to allow stripping. Some might consider stripping somewhat antithetical to the purposes of the program, because this would contribute to keeping other old cars on the road, and the early retirement program is designed to get them off. However, allowing stripping might lead to easier access to inexpensive spare parts and a better-maintained fleet — good for safety and good for emissions performance, though bad for fleet turnover.

Basing the magnitude of the bounty on the performance of the specific vehicle can avoid retiring relatively clean vehicles but will add to program costs (by requiring tests to be performed) and may cause owners to attempt to distort test results, e.g., by sabotaging their vehicles' emission controls. If significant levels of tampering occur, measured outcomes will be misleading because many of the vehicles would not

### Retiring Old Cars

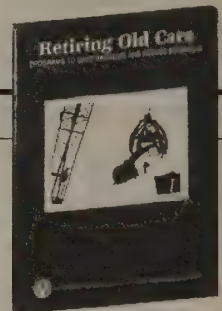
(Programs to Save Gasoline and Reduce Emissions)

Office of Technology Assessment,  
1992; 30 pp. ISBN 052-003-01288-0\*  
\$2.50 postpaid from Superintendent of Documents, P. O. Box 371954, Pittsburgh, PA 05250-7954; 202/783-3238.

\* You must use this number when ordering from the Supe of Docs.

have performed as badly as measured had the program not existed.

The above sensitivity analysis only scrapes the surface of the uncertainty associated with a large-scale vehicle retirement program. For example, the above discussion dealt with "remaining lifetime" primarily in the context of potential differences between pre-1980 and pre-1971 vehicles. The assumptions used for remaining lifetimes implicitly presumed that vehicles entering the program would be average. However, as discussed earlier, it seems more likely that the vehicle population entering the program will be skewed toward vehicles in poorer-than-average condition, whose owners value them less than others and thus are more willing to sell them for a relatively modest sum. Although Unocal's experience implies otherwise, we are concerned about the potential that the average lifetime of vehicles entering the program might be considerably less than the assumed 3 years. Obviously, if the program attracts primarily owners who might otherwise have soon retired their vehicles even without the program, the pollution reductions that could be credited to the program would be quite small.



## Redefining Designing

To consumers and designers alike, the word design mostly refers to how something looks — its styling. Style without thoughtfully developed function tends to be effete, annoying to use, and occasionally dangerous. Such designs are almost always wasteful of money and resource, yet they are what sells. Mr. Mitchell argues that the problem lies with the design process itself. His thoughtful book presents his arguments, buttressed by such innovators as Brian Eno, Cristo, and Christopher Alexander. He has a good time blasting such bushwah as deconstructionist architecture, but most of the book is devoted to developing a new way of looking at design. He's honest enough to show the work of others; you'll find good discussions of recent work on "transparency" and "softtechnica" among other concepts. Highly recommended. —J. Baldwin

Alexander emphasizes that his team's book constitutes a pattern language, not the only one possible. He views each pattern in the book as a hypothesis, though he feels more confident that some patterns represent underlying, invariant relationships between form and activities than do others. In different cultures and in application to new building tasks new patterns may have to be developed. Moreover, Alexander believes that each of us carry our own pattern language within us that, while largely shared with our culture, is personal and independent. It was these implicit pattern languages that were the source for building and craftwork before geometrical design criteria began to predominate with the onset of industrialization. According to Alexander it is now necessary to rediscover and make explicit pattern languages as a means of reacquainting people — designers and non-designers alike — with what he terms "the timeless way of building."

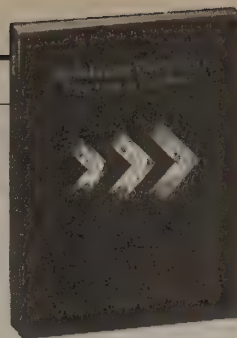
Designers' efforts have not resolved the issues raised by industrialization but instead have worsened them. The piecemeal aggregation of designed objects, with little regard to their contexts of use or their aftereffects, has led to some of the most pressing of contemporary problems. The designs for automobiles, for example, are judged by criteria such as styling, performance, efficiency, and status-conferring power. Highway systems, parking lots, garages, and so on are developed independently to cope with the ever-growing number of cars. But the design of the elements of the system as products, as objects, in isolation from one another, has led to a range of problems that have not been adequately addressed. The most serious of these problems is traffic

accidents, which claim roughly the same number of lives each year in the United States as were lost by Americans in battle during the whole of the Vietnam War (about 48,000). In addition, there are traffic jams and parking problems brought on by the inability of the system to cope with such an influx of cars. Further, the manufacture and operation of cars leads to pollution and resource depletion. So rather than providing a means of coping with industrialization, the billions of hours of product-design effort spent on the automobile have merely made matters worse.

## Redefining Designing (From Form to Experience)

C. Thomas Mitchell, 1993; 162 pp. ISBN 0-442-00987-9

**\$34.95** postpaid from Van Nostrand Reinhold/Order Dept., 7625 Empire Drive, Florence, KY 41042; 800/842-3636



## Green Products by Design

Designers manage the interface between technology and everything else. They are in a unique position to influence the cumulative effects of each design decision, and thus how a technology will affect the environment. This US-government-sponsored paper (from the Bush administration, yet!) recommends that designers regard environmental attributes as design objectives rather than as constraints — as is usually the case. The first chapters discuss the effects of design decisions on the environment, the middle chapters address Green Design strategies, and the last, inevitably, bring up the matter of proposed government regulations and the standards for them. It's a taste of things to come — subject, of course, to the usual delaying tactics by old-mode thinkers. It isn't going to be easy. —J. Baldwin

### Green Products by Design

Office of Technology Assessment, 1992; 128 pp. ISBN 052-003-01303-7\*

**\$6.50** postpaid from Superintendent of Documents, P. O. Box 371954, Pittsburgh, PA 05250-7954; 202/783-3238.

\*You must use this number when ordering from the Supe of Docs.

A systems approach to design thus involves a unified consideration of production and consumption activities: supply-side and demand-side requirements are treated in an integrated way. This is a more far-reaching design approach in which designers might ask:

• How would new supplier and customer

relationships affect the management of product materials throughout their life cycle?

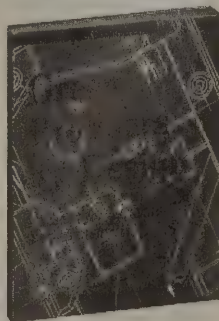
• How could the same consumer need be fulfilled in a "greener" way (i.e., thinking about a product in terms of the service it provides, rather than as a physical object)?

• How could other companies' waste streams be used as process inputs?

• How might product design changes alter the waste stream so that it could become a useful input into another industrial process (i.e., wastes should be regarded as potential products, not just residuals of a particular industrial process)?

Perhaps the ultimate extension of the manufacturer take-back concept is the "rent model," in which manufacturers retain ownership of products and simply rent them to customers. This gives manufacturers incentives to design products to maximize product utilization, rather than simply sales.

This idea was implemented in the telephone industry for many years. Before divestiture, AT&T leased virtually all telephones and thus was able to readily collect them. AT&T designed its phones with a 30-year design lifetime, and collected almost every broken or used telephone. The phones were either refurbished or were processed for materials recovery. However, with the end of AT&T's regulated monopoly and the creation of a competitive market, the number of telephone manufacturers dramatically increased. Consumers were given a wide variety of product choices. The number of phones purchased by consumers, as opposed to leased from the Bell System, grew rapidly. Accordingly, the proportion of telephones that were thrown away rather than fed back to the Bell System also increased, with a corresponding drop in the number of units available for reuse or recycling. It is estimated that approximately 20 to 25 million phones are now disposed of each year.



## Fein Sander

Last issue, we showed the Ryobi detail sander, similar to this one in purpose and principle. Several dealers have since suggested that I also review the Fein, a much more expensive machine. Like the Ryobi, it will sand tiny details right up to edges on ledges without chattering around and marring anything, and will ride gracefully right into corners. As befits the price, it is professionally heavy-duty and smooth-running. Even better, the Fein can be had with a unique, oscillating sawblade with which you can execute the most fussy trimming and controlled hole- and slit-cutting right out in the middle of a panel, without executing yourself (the blade won't cut skin). Truly useful. —J. Baldwin

### Fein Triangular Sander

**\$199.95** (\$208.90 postpaid) from  
Trendlines, 375 Beacham Street,  
Chelsea, MA 02150;  
800/767-9999



## Screwdriver redux

I have been taken to task by several readers for extolling the electric screwdriver last issue (p. 126). What's wrong with good old no-battery hand-power (they ask)? At the very least, why not use one of those spiral Yankee screwdrivers that work by a less demanding push-pull motion?

Human beings were not built to make certain motions over and over as if they were machines. Millions of sport and on-the-job injuries are good evidence of that. I have no doubt that in

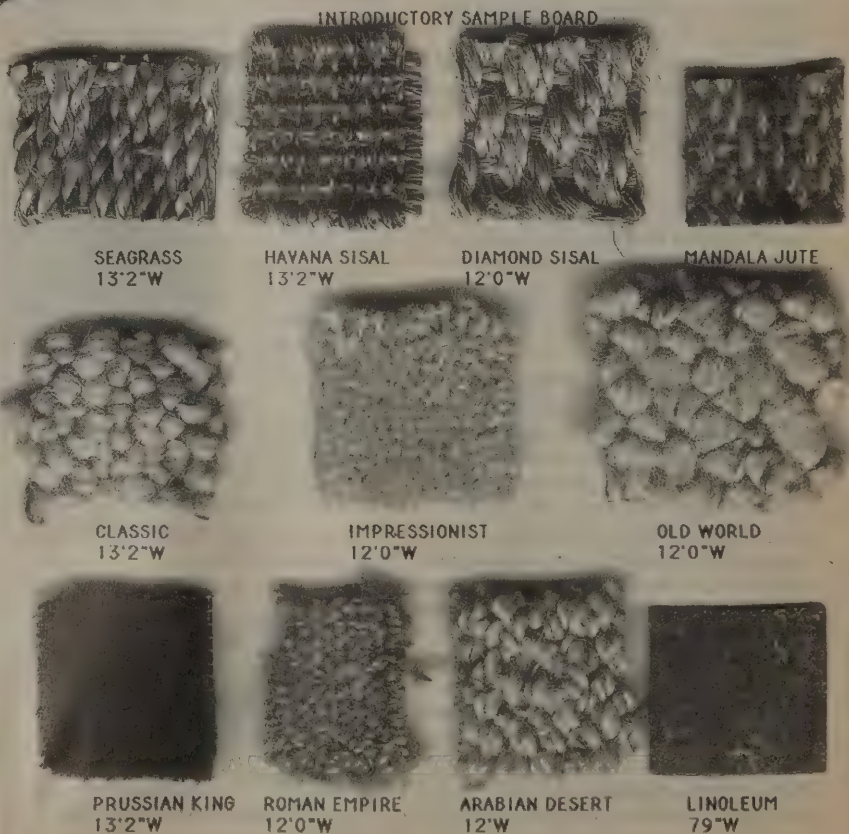
the good old days, many permanent injuries were inflicted by the requirements of traditional hand tools. I say: let the machines do the work that machines do best. As for the Yankee driver, I find it awkward (a big one needs nearly two feet of clearance), inept at taking screws out, not very versatile, and twice as expensive as a good electric model. You don't need either if your life isn't multipliciously screwy. —J. Baldwin

## Hendricksen Floorcovering

Hi-tech floorcoverings (and floors) may successfully repel the foe, but they can poison sensitive folks (and possibly everyone) with a cocktail of noxious exudates. Hendricksen sells "natural" carpet, in wool that can even be had undyed, several types of sisal, coir (from coconuts), and real linoleum. (Did you know that linoleum is made from materials such as pine resin, linseed oil and cork?) Prices seem competitive with many synthetics. I can't vouch for durability except for the linoleum: my parents' home had linoleum-covered bathroom and kitchen floors and counters that still looked new after 45 years. —J. Baldwin

### Hendricksen Floorcovering

Information from 8031 Mill Station Road,  
Sebastopol, CA 95472; 707/829-3959



## McNichols "Hole Products"

Here's a company that sells holes surrounded by metal — one sure way to use fewer resources without sacrificing

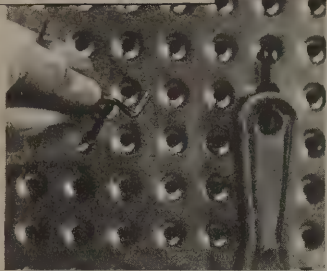
utility. Yeah, I realize that most readers are not going to put in an industrial metal deck, but it's the principle of the stuff that's interesting. Now that you know the material is available, be

imaginative. What can be done that couldn't be done before? Think exoskeletal. Think geometry. Think air. —J. Baldwin

### McNichols Company

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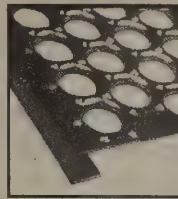


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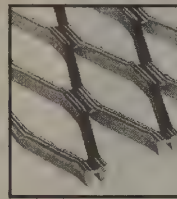
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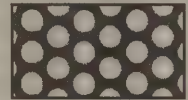
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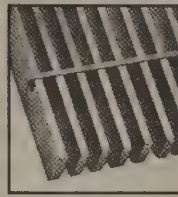
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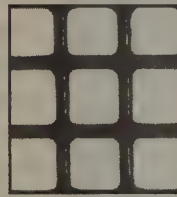
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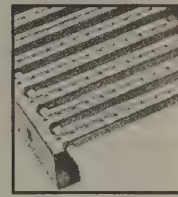
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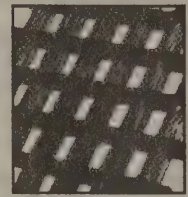
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## Motorless Motion

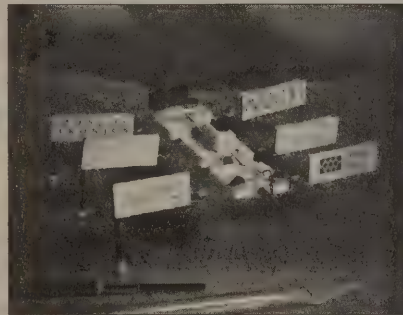
Modelmaking has come full circle. Useta be that model airplanes were made out of zillions of little parts we hand-cut and then covered with maddeningly fragile paper. Now kids just snap plastic parts together with zero skill — and zero learning. But there are few kits for experimental robotics. Despite being high-tech, robots demand and engender real modelmaking ability. You want Boris, a six-legged insectoid, with "muscles" made from shape-memory (Nitinol) wire? You're gonna have to make him using the plans in this well-detailed manual and the included supply of muscle wire. The manual has instructions and techniques for constructing many musclewired beings, each more complex than the one before. Boris is the last. It also includes supply sources, and instructions for building the computer control interface (the brains). I'd say that a reasonably intelligent, computer-hip kid could handle the job. Nothing simulated about it. —J. Baldwin

### Motorless Motion

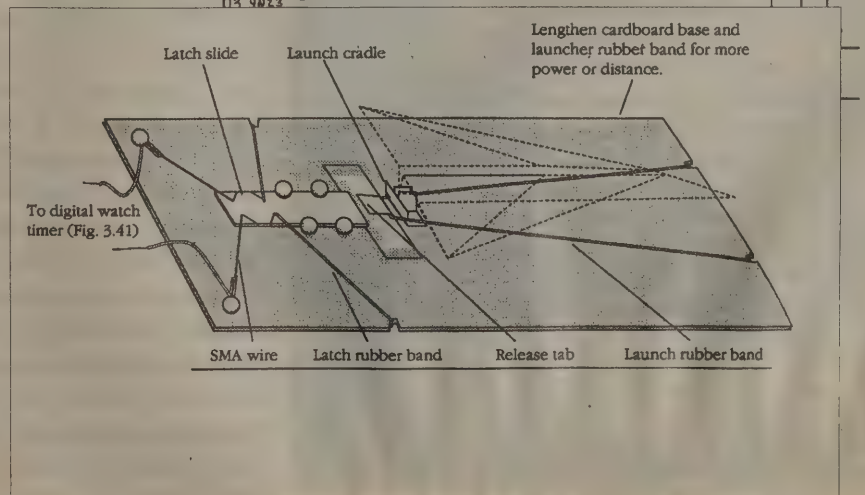
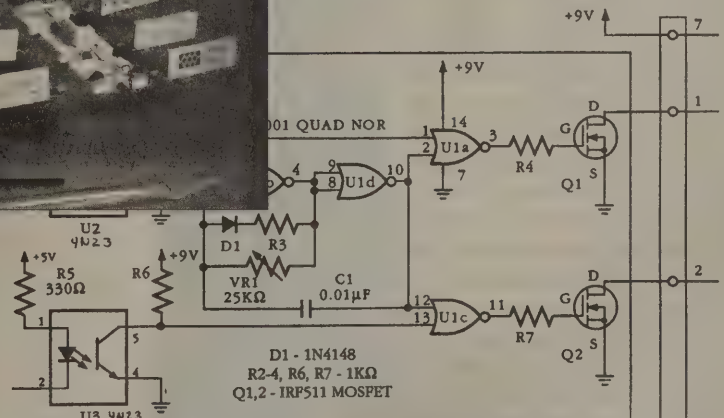
(Working With Shape Memory Wires)

Roger G. Gilbertson, 1992; 112 pp.  
ISBN 1-879896-11-7

**\$54.80** (\$58.80 postpaid) from Mondo-Tronics, 524 San Anselmo Avenue #107, San Anselmo, CA 94960; 800/374-5764. Note: the book's price includes Deluxe Sample Kit (crimps, and 1 meter each of 50, 100, and 150µm Muscle Wire).



Boris, the motorless, six-legged walking machine, and part of its driver circuit.



So much of what we read and see and hear about technology is devoted to the promotion of the basic rightness and goodness of technology-driven "progress." The glossiest spokesmen for technology (such as General Electric's television star of the 1950s, Ronald Reagan) have focused the mainstream media's highest prime-time production values on the message that "progress is our most important product."

Part of our mission is to present alternative points of view. But questioning and criticizing technology, the way Jerry Mander and Langdon Winner did in WER #73, is just the beginning of the process of learning to think critically about technology.

Until we can get a vocabulary for talking about tools in terms of human values — about what is worth accomplishing with these tools, at what cost — we can't hope to solve the problems engendered by technology. We need to keep questioning. We also need to go beyond questioning technology, and consider ways to transform technology.

Neil Postman's *Amusing Ourselves To Death* (WER #55: 118) was about the way television and broadcasting irrevocably changed the mode of political discourse in America. Intrinsicly based on a well-read citizenry (Tom Paine's *Common Sense*, Postman noted, sold 300,000 copies in five months), governmental process is now served to an audience of electronically entranced consumers who don't discuss issues with one another, but ingest issues and candidates that are packaged and fed to us as images and sound bites. In the following pages, Postman talks directly and bluntly about ways humans might regain control over our tools.

This interview was conducted in New York on May 14, 1992, by Volker Friedrich, a German freelance journalist who has interviewed philosophers and scientists including Karl R. Popper, Richard Rorty, and John Gibbons.  
—HLR

VOLKER FRIEDRICH

INTERVIEWS

# The Same

NEIL POSTMAN

*Volker Friedrich:* Your recent book is titled *Technopoly*. What does your title mean?

*Neil Postman:* I use the word "Technopoly" to refer to a culture which is willing to submit all of its social institutions to the control of technology. I make a distinction between a technopoly and a technocracy, in that a technocracy is a culture which is surrounded by technologies, but which is still governed to some extent by traditional social systems. Religion and politics and education, for example, are still governed by traditional ideas about these things. So there is a struggle in a technocracy between the demands of the new technologies and the requirements of an old tradition in our symbolic life.

A technopoly is a culture in which the demands of the technologies win decisively, so that every possible accommodation is made by the culture to conform its beliefs to the needs of technology.

*VF:* You say that the way we use technology is largely fixed by the structure of the technology itself. Functions or operations of a technology are the results of the form or the shape of the technology. What follows from this idea?

*NP:* I have to modify that idea a bit, as I do in my book. Every technology does have a special form or structure to it, and that structure guides us in how we will use the technology. But I also say that this does not mean that human beings are helpless in the face of technology. We can exercise control over the functions of a technology through political action or social policy or even education. But we must never underestimate the fact that every technology has certain requirements that are set by the form of the technology. For example: if you invent a 747 jet aircraft, the form of the aircraft suggests what its uses will be. You won't use it to transport commuters from the suburbs of Stuttgart into Stuttgart, because the form of a 747 makes it uneconomical and improbable that you can use it that way. If you invent a 747 you will use it for intercontinental travel. If you invent a television, its form will suggest that it is best used for the communication of moving pictures. You can use it for other things, but its structure will almost demand that you use it to display moving pictures. So this is what I mean when I say



I'm not saying we should

smash the machines.

# Mindless, Stupid Process

I'm saying we should

understand what the

machines will do, and then

try to prepare our culture

for the consequences.

that the form of a medium will have a very powerful influence on what its functions will be in any society.

VF: As soon as we initiate a technology, as soon as we allow a technology to be part of our lives, the technology brings to bear all its consequences, as you explain in your book. What does this imply, in your opinion, for a responsible policy?

NP: Here is what I think it means. I think we have to be more aware, as best we can, of the possible consequences of new technologies, so that we can prepare our culture for those technologies. If, for instance, we knew in 1902 what we know now about the automobile, there were many things we could have done so that the Schwarzwald, for example, wouldn't be dying, and cities would not be choked with traffic, and the air wouldn't be poisoned. I suppose we might have been able to predict some of those consequences in 1902 or 1910 or 1920. If we had thought about it, there were plenty of things we could have done to prepare ourselves for that technology. But we didn't think about it. And in 1946 no one really thought about, or made any preparations for, television — at least here in America. We are going through the same mindless, stupid process with the computer now. The computer is here, people are not even considering some of the negative consequences of computer technology. No serious preparations are being made to help the culture preserve certain things that the computer can destroy. So I'm not making an

argument for a Luddite position. I'm not saying we should smash the machines. I'm saying we should understand what the machines will do, and then try to prepare our culture for the consequences, and in preparing the culture for consequences, try to make sure that we can preserve that which we think is worth preserving, and allow those changes that we think are acceptable.

VF: You write in *Technopoly* that there is an ideological tendency in every tool, and I think that's transferable to technology in general. But that would mean that every technology is a political issue or political factor.

NP: Absolutely. There are many ways to say this. You could say that every technology has embedded in it an ideological bias or an epistemological bias. Or you could say (as you did) that every technology is fundamentally a political issue or even a moral issue. But a technology like the telegraph, with its great emphasis on the speed with which information is moved, changed people's conception of what they mean by information, and what they do with information. There is an old saying: to a man with a hammer, everything looks like a nail. If you have a hammer, you go looking around for things that you can bang with it. I suppose we could say that to a man with a pencil, everything looks like a sentence. To a man with a television camera, everything looks like an image. To a man with a computer, everything



looks like data. In other words: each technology slices up the world for us in a certain way. It makes us look at things differently from the way we were accustomed to looking at them. This is inevitable, and it only becomes a problem if people are unaware of how their perceptions and their world view are being changed by the technology.

VF: Technological developments are normally done by companies, industry, and so on. Is there a need for control? And wouldn't control, however it were organized, be the end of free enterprise?

NP: Not necessarily. I think that we can have a free-market system that

nonetheless has certain controls which would prevent what you might call free-market extremism. For example, even in America — which is supposed to be the most extreme case of the free market in operation — we have (in theory) controls over the uses of television. Maybe not many people in Europe know this, but the American courts and American law state that television — that the airwaves — cannot belong to a person; they belong only to the people. Therefore, anyone who wants to run a radio or television station must get a license from the people, and must promise to broadcast in the public interest, convenience, and necessity. Every three years that person has to reapply to have the license maintained. And the license (in theory again) can be revoked — by the people. The agency that represents the people is the Federal Communications Commission. So: even here in America there is a need — or we have felt a need — to pass laws and establish agencies that exert some control over the use and growth of technology. In Denmark, if I'm not mistaken, where they have advertiser-supported television, it is forbidden to have commercials directed to small children, or commercials for banks, or medicines, or political or religious organizations. Denmark is as civilized a country as America, and believes in free speech, but it was felt that certain constraints had to be put on advertisers. There are many examples of this even in America, where people become concerned about the possible consequences of some uncontrolled technology. And so we put into place certain restrictions. This is also true of the airlines. The airplanes are a very impressive and widely used technology, but even in America the Federal Aviation Agency exerts some control over how the airline industry must operate. So when I say that some con-



trols on technology have to be put in place, it does not mean that I'm a socialist, or that the free-market system will be destroyed — not necessarily. You can have a modified free-market system that gives people most if not all of the benefits of a free-market economy, but at the same time gives all of the people some protection against grotesque exploitation of new technologies.

VF: I think someone who talks like you is in danger in America of being called a socialist because he pleads for a little bit of control. That's my experience here in America. But the problem, I think, is who defines what should be controlled, where should we have protection, and so on.

NP: You're quite right that the key questions are what sort of controls ought we to have, and who will enforce them, and indeed whether we should have them in the first place. The usual way that we deal with this in America is through discourse, through dialogue, through conversation — so that people begin to discuss the issues, and then let their legislators know how they feel about these different things. Then, at city levels and state levels and federal levels, it becomes the people's will that certain kinds of controls be put in place. And that's



what we call the democratic way. I'm not in any danger, by the way, of being called a socialist. President Herbert Hoover was a great conservative and believer in the free-enterprise system (as it was called). And he's almost a symbol — almost a metaphor — for a conservative. In 1926, I think, when he was secretary of commerce and not yet president, he spoke about radio, and said it was unthinkable that radio should be used for commercial purposes. He thought it was a great instrument for public education and the advancement of culture, and that was the way it ought to be used. So: there are conservatives who believe, as I do, that you need to have a serious conversation in the society about the consequences of technology, with a view (among other things) to devising certain constraints, so that technology doesn't just completely take over.

VF: What do you suggest as a way out of "technopoly?"



e automobile, there were many things we could

NP: There are two ways to answer this question. One is: what can an individual do, irrespective of what the society does? The other is: what can the society do, irrespective of what the individual does? Let's take the second one first. I'm a great advocate of what you might call "media education" or "technology education." I think we have to start in the schools, from the earliest grades right through the universities, to have students study in a serious way the history and social effects of technology, so that they'll have a perspective on technology and will begin to understand the ways in which a technology alters our world view and our culture. So: through education, is one way. Obviously, through political action and legislation is another way — and even through general social policy. Now what can the individual do? Well, *Technopoly* has a number of suggestions that an individual can follow — for example, paying a little more attention to history, a little more attention to spiritual traditions. The individual must try to become a kind of resistance fighter, someone who is always questioning the assumptions of technology. I was talking to a young man the other day; describing a scenario for the future, he said, "Through television, telephone, and computer technology we will be able to shop at home, we'll be able to vote at home, we'll be able to do everything at home."

And I said to him: "In other words: we'll never have to go out in the street, we'll never have to meet other people, we'll never have to see our fellow citizens." Well, he hadn't thought about it in that way. What I was doing was questioning his assumption that it would be a good thing to be able to vote at home and shop at home and never go to a library and never go to a voting booth and never go to a store and never go to a theatre. He'd thought that would be wonderful. When I raised the issue of what that would do to our sense of community, he began to think about it. So a resistance fighter is someone who says: Well, let's look at this. Is this the sort of people we want to become? Is this the kind of culture we want to have?

VF: Another part of *Technopoly* is the media. In *Amusing Ourselves to Death*, you have criticized the world of mass media, and especially American TV. Do you think your analysis is still valid, or do you see any changes?

NP: Well, there are changes: it's gotten much worse. When I started to write the book, the television networks — CBS, NBC, ABC — still reigned supreme in America. Cable television was just beginning to come into its own. Now cable is quite well developed, and is a serious challenge to the networks; there are people in my neighborhood who have cable access to sixty or sev-

enty television stations. This keeps them glued to their television sets even more than they were when I was writing the book; America has changed more in the direction that I wrote about. I would say that the dangers I warned of in *Amusing Ourselves to Death* have become more acute. Illiteracy continues to grow. The lust for entertainment and consumerism continues to grow. Things have grown even worse than I depicted in my book.

VF: Regardless of the differences between the cultures and so on, do you think that the basic structure of the media is everywhere the same, so that your criticism is transferable to the European system?

NP: I'm very interested in what's happening in Europe. I've spent a lot of time in Europe, especially by the way in Germany, which in some ways is the most interesting country right now in Europe. But I've also spent time in Scandinavia, and Italy and France and Belgium and Holland and a few other places. I think the Europeans, especially the political leaders and the intellectuals and journalists, are much more aware of some of the negative consequences that the new media can bring to European culture. And they are very interested in talking about this, in writing about it — happily for me. I think they believe that it is not too late to prepare their cultures for the total invasion of, say, television. I find it inspiring to go to Europe, because there I can talk to people who actually believe that they could invent social policies and laws and educational programs that would help prepare Europeans — especially the young — to cope with the new technologies in a more intelligent and human way.

VF: During the Gulf War there were lots of discussions on the role of the media. Many critics said that the Gulf War was presented like a video

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game. Do you think that's true — do media, TV, new technologies like computers change our perception in this direction?

NP: Of war? Well, I think people who say that the war was like a video game are correct. I think that the way it was managed on American television made it quite remote from us. The reality of war, the reality of death, was not very much part of people's consciousness, because we were always shown the wonders of American weapons technology. Also, I think it should be mentioned that almost all the experts (so-called) who appeared on television during the war were technical people — either military people or technologists. We didn't have any playwrights or novelists

or poets or philosophers discussing what was happening. It was a kind of technological party.

VF: There was a lot of discussion in European intellectual circles, and it was a tendency for many philosophers, to say that the media change our perception in general. Do you think that's true?

NP: Yes, it goes back to the point that I made earlier. A medium like television is, as they say, a window to the world. But it's a very special kind of window. It shows you the world in a very particular way. So you are not looking at the world. You're looking at the world as seen through a certain kind of screen. That obviously controls our perceptions of war — and of almost everything else. ☞

## Today Then

*In 1893, things were not going so well for the US economy. Chicago hosted the great morale-boosting Columbian Exposition, putting on a brave face by precelebrating a prosperous future spurred by technology. Seventy-four prominent citizens were asked to say sooth. Most of the prognosticators sound an awful lot like what we hear today. Fascinating, nonetheless. —J. Baldwin*

• Woman will be financially independent of man, and this will materially lessen crime. No longer obliged to rifle her husband's pockets for money, she will not give birth to kleptomaniacs or thieves. Men will learn the importance of proper prenatal conditions, and children will be reared with the same care now given to colts, calves, and dogs. —Ella Wheeler Wilcox, poet

■ It is as useless to attempt to foretell the improvements in mechanics, in industrial arts, and in modes of travel as it would have been 40 years ago for any one to have anticipated the telephone and its now universal use. —Hempstead Washburne, mayor of Chicago

■ The money classes of the world . . . are trying to rest the whole business of a rapidly expanding civilization upon a metal of which there is in the world about enough to form a cube 24 feet square, and which is

being absorbed in the arts of Europe alone at the rate of \$24,000,000 per annum.

Can lines

Finite one way be infinite the other?

Can mankind advance chained to this clog? Can the population, wealth, and business of the world expand indefinitely in every direction — while that which regulates prices is steadily decreasing in quantity and dragging down values, preventing prosperity, crippling enterprise, and creating innumerable paupers? Can the fate of all mankind depend upon a 24-foot cube of an accidental metal? Is not such a condition unworthy of the high civilization into which we are advancing?

What is the remedy? An international paper money which all the wealth of the world would back up and sustain legal tender among all nations. This paper money would be increased in precise ratio to the increase in population or wealth of the world. —Ignatius Donnelly, utopian reformer and futurist

■ It is my hope, by 1993:

—That politics will be understood to mean the science of pure and just government, and not the mere means of enriching base, unprincipled, incompetent, and corrupt men.

—That it will be possible for women to walk from house to house, in city or country, in safety; that girls may go to church or

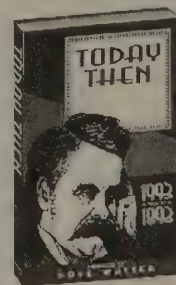
to school, or even take a harmless walk in the fields or woods, without danger of being waylaid and murdered by their "natural protectors." . . .

—That the persons who chance to witness a crime will not conceal and hush it up through fear of being put in jail as witnesses, while the culprit goes free on bail.

—That this country will cease to be the cesspool into which are drained the disease, criminality, and pauperism of all Europe.

—That mothers will no longer be hindered of their obvious right to their own dearly purchased children.

—Elizabeth Akers Allen, poet



### Today Then

Dave Walter. American & World Geographic Publishing, 1992; 160 pp. ISBN 1-59037-124-6

**\$12.95** (\$14.95 postpaid) from Montana Magazine, P. O. Box 5630, Helena, MT 59604; 800/654-1105

## Great Mambo Chicken and the Transhuman Condition

*Whole Earth Review* has been a hotbed of technological hubris for a long time: what else would you call "We are as gods and might as well get good at it"? The core beliefs of several different technology cults — immortality via cryonics, space colonies, biospheres, Dyson spheres, nanotechnology, artificial life, downloading minds into computers — were gleefully seeded by *Catalogs* and *CoEvs* of years past. There are people behind all of these notions: people who want to freeze their heads in liquid nitrogen and store their brains until future scientists figure out how to reconstitute them, people who are worried about the fate of the galaxy because they plan to live that long, people who worry about the heat-death of the universe billions of years from now and start brainstorming ways to escape the End of Everything.

Ed Regis, often funny but never condescending to his subjects, plays the role of an anthropologist on an ethnographic expedition to the subcircles of American culture where cryogenic re-animation, galactic-scale engineering, and home-brewed space travel are commonplace subjects of conversation. Regis doesn't make fun of the people he describes, but he does show how the grandiosity of their ideas — dismantling the outer planets to capture enough of the sun's energy to fuel a population of trillions, for example — reflects that immensely confident view of our own capacities that has distinguished the human race. We're bigger than amoebae, smaller than planets, our ancestors were swinging in the trees very recently, we're good with tools, and we've already started tinkering with the forces that light the stars. Regis evokes humor, awe, and continued reflection on the sheerchutzpah of *Homo sapiens* in this informal but well-informed joyride through the territory of the high-tech high-hubrists. —HLR  
[Suggested by Gregory Daurer]

■ *Fin-de-siècle* hubristic mania was not by any means a new phenomenon. It had appeared on the scene at least once before, toward the end of the nineteenth century when, at about 1880, physicists decided that they had discovered virtually all there was to know about nature. That was when John Trowbridge, head of the Harvard University physics department, went around telling his students not to major in physics: every important discovery, he told them, had already been made. A few years later, in 1894, Albert Michelson, of the University of Chi-

cago, announced that "the future truths of physics are to be looked for in the sixth place of decimals."

That was hubris. The very next year, 1895, Wilhelm Roentgen discovered X rays, and a few months after that Antoine-Henri Becquerel discovered the natural radioactivity of uranium. Suddenly it seemed that there was a whole new dimension to nature, and before the twentieth century was half over it became popularly known as "the atomic age."

■ For Freeman Dyson, the main reason why you had to enclose the solar system was to make room for a growing population. "Malthusian pressures," Dyson had said, "will ultimately drive an intelligent species to adopt some such efficient exploitation of its available resources. One should expect that, within a few thousand years of its entering the stage of industrial development, any intelligent species should be found occupying an artificial biosphere which completely surrounds its parent star."

And for Dave Criswell, too, the essence of life was constant growth and proliferation. "Once you get growth started," he said, "it's not obvious what can stop it." Which, to Criswell, was just as it should be. The universe, after all, was just *dead matter*, and the more of it that got converted into life and mind the better.

Others, such as Frank Tipler, were even more explicit about the need for life to keep expanding out into the universe until the cosmos had been completely subdued. "If life is to survive at all, at just the bare subsistence level," he said, "it must necessarily engulf the entire universe at some point in the future. It does not have the option of remaining in a limited region. Mere survival dictates expansion."

■ From every enlightened engineering standpoint, then, it was all too obvious to Gerry O'Neill and his Princeton students that planet Earth was *not* the best of all possible worlds, that in fact going the planetary route was probably the *worst* way to go if what you were concerned with was making maximum use of resources, optimizing agricultural yield, getting out into space, and distributing the population into smaller, autonomous communities, thereby promoting human welfare and freedom.

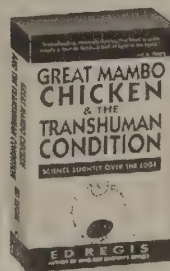
The interior surface of a hollowed-out enclosure, they decided, would make for a better living environment than the outside surface of a planet. First of all, the atmosphere would be kept in by the surface, as in a bank vault. You could rotate the space colony to provide gravity, which would vary according to location. Activities that were better in low-G — like hang-gliding, swimming, or sex — could be practiced in

the low-G zones, while higher-G areas might be reserved for living, manufacturing, or agriculture. The seasons would be controlled, as well as the weather, and plants would have constant sunlight, for there would be windows on all sides through which sunlight could be angled in, by means of mirrors if necessary.

Soon O'Neill was envisioning complete new earths and describing the contours of mostly artificial but nevertheless fantastically lush places in the sky, in words that would have to be dismissed as the most atrocious crackpottery were it not for the fact that there was no reason to doubt that any of it was possible.

"I would have a preference, I think, for one rather appealing arrangement: to leave the valleys free for small villages, forests, and parks, to have lakes in the valley ends, at the foot of the mountains, and to have small cities rising into the foothills from the lakeshores. Even at the high-population density that might characterize an early habitat, that arrangement would seem rather pleasant: a house in a small village where life could be relaxed and children could be raised with room to play; and just five or ten miles away, a small city, with a population somewhat smaller than San Francisco's, to which one could go to theaters, museums, and concerts." . . .

In retrospect, it was inevitable. Why not think about reengineering the earth — and about getting it *right* this time, or at least putting it all together more *intelligently*, with planning, design, forethought, and conscious intention? Enough of this living on the accidental remains of a collapsed interstellar dust cloud. We've seen the earth and all its flaws, all its drawbacks, and now we've seen the outlines of something better. And since we've seen all that, and we have the wherewithal, technologically and scientifically, to do it, well then, why shouldn't we go ahead?



### Great Mambo Chicken and the Transhuman Condition (Science Slightly Over the Edge)

Ed Regis, 1990; 308 pp. ISBN 0-201-56751-2  
**\$8.95** (\$9.95 postpaid) from Addison-Wesley Publishing Co./Order Dept., 1 Jacob Way, Reading, MA 01867; 800/447-2226

# A Privacy Toolkit

BY ROBERT LUHN

*"Privacy is the most comprehensive of all rights . . . the right to one's personality," wrote Louis Brandeis for the Harvard Law Review in the 1890s. But Judge Thomas Cooley, an obscure contemporary of Brandeis, probably put it better: "Privacy is the right to be let alone."*

*Unfortunately, our founding fathers neglected to mention privacy specifically in either the Constitution or the Bill of Rights. The Fourth Amendment does protect you from "unreasonable searches and seizures," but it doesn't prevent your boss from bugging the company bathroom, a federal employer from demanding a urine sample, or your nosy neighbor from monitoring your cordless phone conversations with a police scanner. In sum, your safeguards against government, corporate, and freelance snoopers are pretty slim, dependent on a handful of narrow federal and state laws and scattered court precedents. California and a few other states embed broad privacy protections right up front in their constitutions, but this is an exception, not the rule.*

*If you want to protect your credit rating, prevent your boss from rifling your email, or keep the government out of your bladder, peruse this compendium of vital privacy resources. There's something here for everyone, from the casual reader to the privacy buff.*



*Robert Luhn writes about the politics of technology and is co-author of "The Green PC," a syndicated column about the environmental impact of personal computing. —HLR*

## BOOKS

### Your Right to Privacy

*This omnibus pocket guide from the ACLU covers just about every privacy issue under the sun: what an employer may disclose from your personnel records, confidentiality of AIDS tests, who may ask for your Social Security number, how to correct government records, and how to deal with sneaky private investigators. "If there's enough money, you can get anything," boasts one anonymous PI in the book. "You have to find the weak link in the chain and go for it." The book gives advice in an accessible question-and-answer format, and includes just enough history to give you the proper context. If you buy only one book on the subject, buy this one.*

### Your Right to Privacy

(A Basic Guide to Legal Rights in an Information Society)

Evan Hendricks, et al., 1990; 208 pp.  
ISBN 0-8093-1632-3

**\$7.95** (\$9.95 postpaid) from Southern Illinois University Press, P. O. Box 3697, Carbondale, IL 62902-3697; 618/453-6619 (or the ACLU: see "Advocacy Groups," below)

### Steal This Urine Test

*If you've been asked to fill-this-cup-please, steal this book. "Fighting Big Brother's Bladder Cops!" shouts the back cover. This 1987 volume by the late rabblrouser Abbie Hoffman is still in print — a testament to the growing acceptance of drug testing in America. Dear Abbie gives you the scoop on the history of drugs and the government's drug paranoia, the culture of employee surveillance, the facts (pro and con) about drug use, the inaccuracy of drug testing and, of course, how to beat a urine test.*

### Steal This Urine Test

(Fighting Drug Hysteria in America)

Abbie Hoffman and Jonathan Silvers.  
Penguin Books, 1987; 262 pp.  
ISBN 0-14-010400-3

**\$11** (\$13 postpaid) from Penguin USA/Cash Sales, 120 Woodbine Street, Bergenfield, NJ 07621; 800/253-6476

### Golden Showers

*It began in 1985. [Jeffrey] Nightbyrd, a genial Texan whose easy drawl complements a quick wit and fierce sense of independence, noticed that an increasing*

number of people in Austin were being subjected to urine testing as a condition of employment. "I thought, my God, what's happened to the Texas spirit with all these people lining up to take urine tests like sheep at a shearing. That's pretty antithetical to the Texas motif. I thought it was the most intrusive, totalitarian, Big Brother thing I could imagine."

Nightbyrd was incensed, but like everyone else felt helpless to stop it. Only after thirty construction workers on a local high-rise project were given a surprise EMIT [urine test] and subsequently fired did he decide to take action. "One of the workers complained, 'It's a fascist country when they judge a man on the quality of his urine, rather than on his work.'" Nightbyrd explains, "A bunch of them claimed they were innocent, but that didn't do them any good. Later I got to know their lawyer and learned the drug test was a sham." The contractor was behind on his construction schedule and had speeded up work to compensate. The result was compromised safety and an unusually high number of accidents on the job site.

Instead of taking responsibility, management shifted the issue from contractor safety practices to drug abuse. "It was easier for them to accuse the workers of being stoned or drunk than admitting they screwed up," Nightbyrd said. "The EMIT test was a magic wand, taking the burden off them and putting it on someone else."

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## Privacy for Sale

What happens to that "confidential" credit form you fill out? To that worker's-compensation claim? **Business Week** reporter Jeffrey Rothfeder knows, and it isn't pretty. Rothfeder's book exposes the information underground — the marketplace where credit agencies, the IRS, private investigators, direct marketers, and other "data cowboys" legally and illegally acquire and sell sensitive personal information. To demonstrate the laxity of existing safeguards, the author easily nabs copies of both Dan Quayle's and Dan Rather's credit reports. This wry book is a cautionary tale of how private and government databases threaten personal privacy, the economy, and more.

### Privacy for Sale

(How Computerization Has Made Everyone's Private Life an Open Secret)

Jeffrey Rothfeder, 1992; 224 pp.  
ISBN 0-671-73492-X

**\$22** (\$25 postpaid) from Simon & Schuster/Order Dept., 200 Old Tappan Road, Old Tappan, NJ 07675; 800/223-2336

● "Anybody can learn anything about anybody" . . .

Want proof? Here's a peek at Dan Quayle's credit report, which I bought using my home computer for under \$50.

As a young man, so the report says, Quayle ran up a bill of nearly \$4,000 at Sears. A few years later, he had gotten this tab down to \$356. At Brooks Brothers, he has been more parsimonious. The most the Vice President has ever owed the highbrow clothier is about \$400, barely enough to buy a suit. The mortgage on his sprawling home in Huntington, Indiana, taken out in the early 1980s, tops \$180,000. And here are some key numbers: Quayle's Social Security number ends in 4096 and the last four digits of the number of his MasterCard at First Virginia Bank are 1569. All told, he's a model citizen financially: he consistently pays his bills on time.

One would assume that getting the credit report of the man who's a heartbeat away should be a daunting task. After all, if Quayle doesn't wield the power to stop such an intrusion, who does? But it was simpler than I thought.

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## Undercover

Gary Marx knows about undercover police at first hand. When the MIT sociology professor was a student at UC Berkeley, his student organization promoting racial equality was nearly destroyed when its treasurer — a police agent — embezzled the group's funds. But Marx's book looks beyond political policing and tackles a tougher question: In the face of rising crime and political corruption, when is undercover police surveillance warranted? Marx examines this and many other uncomfortable questions in this extensively researched, surprisingly readable and lively book for academics and policy analysts, and arrives at a rather startling conclusion: "In starting this book, I viewed undercover tactics as an unnecessary evil. But in the course of research I have concluded, however reluctantly, that in the United States they are a necessary evil." Specialists, and some general-interest readers, will find Marx's work absorbing.

### Undercover

(Police Surveillance in America)

Gary T. Marx. University of California Press, 1988; 283 pp. ISBN 0-520-06969-2

**\$13** (\$16 postpaid) from California/Princeton Fulfillment Services, 1445 Lower Ferry Road, Ewing, NJ 08618; 800/777-4726

■ In a 1791 book, *Panopticon or the Inspection*

*House*, Jeremy Bentham offered a plan for the perfect prison. There was to be constant inspection of both prisoners and keepers; cells were to be constructed with bars (rather than opaque doors) around a central inspection tower. His ideas helped give rise to the maximum-security prison, which today is characterized by perimeter security, thick walls with guard towers, spotlights, and a high degree of electronic surveillance. Many of the kinds of controls found in prison are diffusing into the society at large. It is important to ask if recent developments in technology, culture, and social organization are not pushing us toward becoming a maximum-security society.

The maximum-security society is composed of five interrelated subsocieties:

1. a *dossier society*, in which computerized records play a major role
2. an *actuarial or predictive society*, in which decisions are increasingly made on the basis of predictions about our future behavior as a result of our membership in aggregate categories
3. an *engineered society* in which our choices are increasingly limited and determined by the physical and social environment
4. a *transparent or porous society*, in which the boundaries that traditionally protected privacy are weakened
5. a *self-monitored society* in which auto-surveillance plays a prominent role.

In such a society, the line between the public and private is obliterated; we are under constant observation, everything goes on a permanent record, and much of what we say, do, and even feel may be known and recorded by others we do not know. Data from widely separated geographical areas, organizations, and time periods can be merged and analyzed easily. Control is embedded and preventive; informers, dossiers, and classification are prominent. The society becomes, in Erving Goffman's words, a "total institution," and there is no longer a backstage.

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## Privacy: How to Get It, How to Enjoy It

A Mulligan stew of privacy advice, philosophy, resources, humor, with a little conspiracy paranoia thrown in for good measure. But as you read story after story — the "little Einstein" who hacked into twenty-one Canadian computer systems, banks that blithely (and illegally) share depositor information with just about anyone — you begin to see the author's point of view. **Privacy's** pithy chapters identify key privacy abuses (from credit-card scams to the twenty-

four federal agencies that gather intelligence on Americans), offer pointed remedies, explain obscure laws that can help you keep a low profile, and suggest further reading. Sometimes the advice is spot-on ("consider the use of mail-drop services") and sometimes downright weird ("you and your friends might try learning an obscure foreign language to promote privacy"). Either way, it's a fascinating, eclectic read.

Note: Eden Press offers half a dozen other privacy books, from *Personal and Business Privacy to 100 Ways to Disappear and Live Free*. For the privacy anarchist within.

### Privacy

How to Get It, How to Enjoy It

Bill Kaysing, 1977, 1991; 128 pp.

\$18.95 (\$21.95 postpaid) from Eden Press, P. O. Box 8410, Fountain Valley, CA 92728; 800/338-8484 (fax 714/556-0721)

### Privacy in America

David Linowes is one of the privacy experts that every writer cites, and with good reason — his knowledge is encyclopedic. Although this book is similar to *Privacy for Sale* in focusing on the abuse of computerized personal data, Linowes' thoroughly researched and chilling anecdotes will get your blood boiling. Linowes covers everything from genetic screening

to electronic fraud, showing time and again how privacy laws and other safeguards are regularly flouted by government and business alike. The book is light on advice, but its presentation of evidence, drawing on studies, surveys, and polls, makes it worth the price.

### Privacy in America

(Is Your Private Life in the Public Eye?)

David Linowes, 1989; 192 pp.  
ISBN 0-252-01604-1

\$19.95 (\$21.95 postpaid) from University of Illinois Press, P. O. Box 4856, Hampden Station, Baltimore, MD 21211; 410/516-6927

### How to Get Anything on Anybody

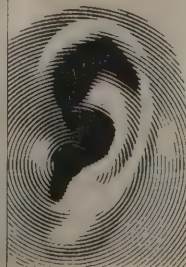
Want to learn how the pros tap a phone, surreptitiously videotape someone, tail a subject, or crack a "secure" computer? This ultimate hardware catalog/how-to-manual for professional snoops even notes where you can buy neat-o spy stuff. It's also a boon for the less nosy, says author Lapin, because "the first time someone kicks you right in the privacy act" you'll be prepared. "Law-enforcement agencies are only the tip of the electronic-eavesdropping iceberg. Most bugs are planted by people to spy on their spouses or to gain an advantage in business."

### How to Get Anything on Anybody

(The Encyclopedia of Personal Surveillance)

Lee Lapin, Paladin Press, 1991. Vol. I: 272 pp. Vol. II: 224 pp.

Vol. I \$30 (\$33 postpaid); Vol. II \$35 (\$38 postpaid). Both from Eden Press, P. O. Box 8410, Fountain Valley, CA 92728; 800/338-8484 (fax 714/556-0721)



## Music for the Surveillance Age

Gary Marx is the author of *Undercover: Police Surveillance in America*. In the midst of pondering the social, ethical, and political consequences of police surveillance, he offers this annotated version of "Every Breath You Take," by The Police.

Every breath you take [breath analyzer]  
Every move you make [motion detector]  
Every bond you break [polygraph]  
Every step you take [electronic anklet]  
Every single day [continuous monitoring]  
Every word you say [bugs, wiretaps, mikes]  
Every night you stay [light amplifier]  
Every vow you break [voice stress analysis]  
Every smile you fake [brain wave analysis]  
Every claim you stake [computer matching]  
I'll be watching you [video surveillance] ☹

### Other books of interest:

#### Don't Bug Me:

#### The Latest High-Tech Spy Methods

(M.L. Shannon, \$19.95 list/\$22.95 postpaid, Paladin Press — address above). A useful companion to Lee Lapin's works, this shows you how to protect yourself from electronic eavesdropping.

#### The Law of Privacy in a Nutshell

(Robert Ellis Smith, \$14.50 postpaid from *Privacy Journal* — address below). Not for casual readers, but if you have an interest in the law and the historical underpinnings of privacy rights (from torts to "fair information" practices), this book is for you.

#### Protectors of Privilege: Red Squads & Police Repression in Urban America

(Frank Donner, ISBN 0-520-08035-1; \$16 list/\$19 postpaid, UC Press — address above). A thoroughly researched book on repressive police tactics over the last thirty years, with much coverage devoted to covert surveillance, and the illegal compilation and distribution of dossiers.

#### Cloak and Gavel: FBI Wiretaps, Bugs, Informers, and the Supreme Court

(Alexander Chams, ISBN 0-252-01871-0; \$24.95 list/\$26.95 postpaid, University of Illinois Press — address above). How Hoover's FBI bugged, harassed, and otherwise attempted to manipulate the Supreme Court during the fifties and sixties.

#### Confidential Information Sources, Public and Private

(John Carroll, ISBN 0-7506-9018-6; \$49.95 list/\$53.45 postpaid, Butterworth Publishers, 80 Montvale Ave., Stoneham, MA 02180; 800/366-2665). The skinny on private and public databases — who maintains what data on whom and what rules (if any) regulate how that information is disseminated. A slow read, but a valuable sourcebook.

#### The I.R.S. and the Freedom of Information and Privacy Acts of 1974

(Marcus Farbenblum, ISBN 0-89950-640-2; \$32.50 list/\$34.50 postpaid, McFarland & Co./Order Dept., Box 611, Jefferson, NC 28640; 919/246-4460). Although the subject is arcane, this readable guide details how the IRS withholds records and obscures its own procedures — and how you can make the IRS "tell you everything you have a right to know."





## Newsletters and Journals

### Privacy Journal

This indispensable eight-page monthly digest covers key privacy stories, legislation, abuses, and trends in the US and abroad, with a particular focus on computerized information and telecommunications. Publisher and gadfly Robert Ellis Smith has been putting out *PJ* for nearly 20 years, frequently testifies before Congress on privacy legislation, and is a constant thorn in the side of credit bureaus. This accessible guide will inspire you to get mad. *PJ* also publishes useful reference books and studies.

**Privacy Journal:** \$109/year (12 issues); Call for discount rate for individuals. P. O. Box 28577, Providence, RI 02908; 401/274-7861.

### Privacy Times

This biweekly, ten-page newsletter is more news-oriented and more timely than *Privacy Journal*, with in-depth coverage of such topics as why the Bush administration tried to shut down the FOIA office, and summaries of recent court rulings affecting privacy.

**Privacy Times:** \$250/year (\$225 prepaid). P.O. Box 21501, Washington, DC 20009; 202/829-3660, 202/829-3653 (fax).

### geneWatch

Worried about who's peeking in your genes? This bimonthly newsletter is a one-stop source for news about the social, political, and ethical consequences of genetic engineering: how insurers use genetic testing to weed out "bad" risks and DNA identification, plus non-privacy-related issues.

**geneWatch:** \$24/year (6 issues). Council for Responsible Genetics, 5 Upland Road, Cambridge, MA 02140; 617/868-0870

## Marc Rotenberg's Privacy Shelf

Marc Rotenberg is the director of the Washington office of Computer Professionals for Social Responsibility, chair of the ACM Committee on Scientific Freedom and Human Rights, and something of an expert on privacy and telecommunications. In an informal electronic interview conducted over Internet, Rotenberg shared some important resources for anyone concerned with privacy issues.

**The Handbook of Personal Data Protection** (Wayne Madsen, 1992. ISBN 1-56159-046-0; \$170 list/\$175 postpaid from Stockton Press). Outstanding and comprehensive. The bible of international privacy law.

**Regulating Privacy: Data Protection in Europe and the United States** (Colin Bennet, 1992; \$16.95 from Cornell University Press). The first comparative study of privacy protection law. Well-written and informative.

**Uneasy Access: Privacy for Women in a Free Society** (Anita Allen, 1988. ISBN 0-8476-7328-8; \$21 list/\$24 postpaid from University Press of America). Explores the role of gender in privacy. An important book by a leading privacy scholar.

**Privacy Laws & Business** (£240/year; 4 issues. Roxeth House, Shaftsbury Avenue, Harrow, Middlesex HA2 0PZ; 011-44-81-866-8641). An excellent British publication that's timely and comprehensive. A little expensive, but invaluable for people who are interested in closely following privacy developments around the world.

**"The Right to Privacy"** (Samuel Warren and Louis Brandeis, 1890, in the *Harvard Law Review*). For historians and privacy experts, this 1890 article is the starting point for privacy law. Considered one of the most important law review articles of all time (it essentially created the legal right of privacy in the US), it is still a valuable resource for understanding the right of privacy. ☺

# Reports & Pamphlets

## If An Agent Knocks

This bargain pamphlet is the ultimate how-to privacy guide. A simple question-and-answer format shows what to do if a federal agent tries to question you, the scoop on agencies that gather political intelligence, how the feds infiltrate political organizations, and much more. In English and Spanish.

**\$1** from the Center for Constitutional Rights, 666 Broadway, New York, NY 10012, 212/614-6464

## How to Use Freedom of Information Statutes

This informative guide shows you how to use the Freedom of Information Act (FOIA) and California Public Records Act to gain access to files maintained on you by the government. You learn what's open and what's exempt, and how to make a request (sample letters are included); relevant addresses and copies of the two acts in question are included.

**\$12 (students: \$5)** from the Freedom of Information Project, 102 Banks Street, San Francisco, CA 94110

## Your Right to Privacy

This special *Congressional Quarterly* report is an excellent introduction to personal and workplace privacy, with a summary of federal privacy laws, a table detailing privacy laws by state, and tips on how to protect yourself.

**\$7** (January 20, 1989 Editorial Research Report) from Congressional Quarterly Inc., 1414 22nd Street NW, Washington, DC 20037; 202/822-1439

## Genetic Monitoring and Screening in the Workplace

This report from the Office of Technology Assessment isn't exactly light reading, but it contains information about the state of genetic testing; the ethical, political and privacy implications; surveys on use and attitudes; and copious references.

S/N 052-003-01217-1. **\$12** from the Superintendent of Documents, Government Printing Office, Washington, DC 20402-9325; 202/783-3238

## Privacy Law in the United States: Failing to Make the Grade

This 32-page report by the US Privacy Council and Computer Professionals for Social Responsibility (CPSR) spotlights huge gaps in American privacy laws and lax enforcement by federal agencies, and argues persuasively for the creation of a national data-protection board. Somewhat technical, but a good source.

**\$10** from CPSR, P. O. Box 717, Palo Alto, CA 94301; 415/322-3778. Internet: [cpsr@csli.stanford.edu](mailto:cpsr@csli.stanford.edu)

## Protecting Electronic Messaging: A Guide to the Electronic Communications Privacy Act of 1986

Is an email message as protected as the US mail? A phone call? A conversation in the company cafeteria? This pricy, technical guide clarifies these and other questions, helps employers interpret federal law and, if nothing else, will motivate your boss to adopt strict guidelines on email privacy.

**\$195 (\$55 for members)**, Electronic Mail Association, 1555 Wilson Blvd., Suite 300, Arlington, VA 22209-2405; 703/875-8620

# Advocacy Groups

## American Civil Liberties Union

There's no national 911 for privacy emergencies, but the ACLU is the next best thing. This granddaddy of all privacy organizations lobbies, educates, and litigates on just about every privacy front. Your local ACLU chapter is a resource for cheap reports covering many privacy concerns (from student rights to FOIA access); it can offer legal referrals and, in certain cases, represent you in court.

Membership **\$20/year**. ACLU, 122 Maryland Ave. NE, Washington, DC 20002; 202/544-1681

## Electronic Frontier Foundation

The EFF was co-founded by 1-2-3 creator and former Lotus Development chairman Mitch Kapor to "promote privacy services for network users and examine the interaction of computers and society." In short, EFF advocates electronic democracy in all its forms, and is a force in ensuring that new communications technologies are open to everyone and receive proper constitutional protection. The group lobbies Congress and federal agencies, defends users accused of ill-defined computer crimes, publishes reports, sponsors various conferences, provides legal referrals

and counseling, and sometimes sues federal agencies under the FOIA. *EFFector Online*, the EFF's online newsletter, shares tips, information, and recent testimony via popular online services and electronic bulletin boards.

Membership **\$20/year (students); \$40 (regular); \$100 (corporate)**. Electronic Frontier Foundation, 155 Second Street #35, Cambridge, MA 02141; 617/864-0665, 617/864-0866 (fax)

## Computer Professionals for Social Responsibility

Like the EFF, CPSR is concerned about civil liberties, computing, and telecommunications. The well-regarded group has testified at more than a dozen Congressional hearings, led the campaign to stop the FBI's wiretap proposal earlier this year, and recently recommended privacy guidelines for national computer networks. Current CPSR priorities include medical-record privacy, curbing the misuse of Social Security numbers, and promoting privacy for communications users.

Membership **\$50/year (basic); \$75/year (regular)**. CPSR, P.O. Box 717, Palo Alto, CA 94301; 415/322-3778.

## National Consumers League

For activist consumers and workers, NCL is the group to join. NCL tackles every-

# Online Resources for Computer Users

## CompuServe

CompuServe is the Macy's of online services — there's something for everyone. Check out the Electronic Frontier Foundation (GO EFFSIG), whose rallying cry is "Civilize Cyberspace!" EFFSIG offers online conferences, Q&A with EFF staff, and a well-stocked library that includes back issues of **EFFector Online**, essays on privacy issues, online cyberpunk magazines, and more. Other relevant special interest groups (SIGs): the Journalism Forum (GO JFORUM), which focuses on privacy, ethics and journalism; the Legal Forum (GO LAWSIG), which includes discussion and papers about privacy and telecommunications law;

and the Legal Research Center (GO LEGALRC), an online legal search service that includes indexes for over 750 law journals, studies, publications, plus access to a handful of legal databases.

**Membership \$39.95 one-time fee, plus tax, plus \$4 handling. Fee setup is complex; call for information. Box L-477, Columbus, OH 43260; 800/848-8199**

## The WELL

This laid-back online service is the premier online privacy resource. Put out by the same people who put out **Whole Earth Review**, the WELL offers a cornucopia of databases, online conferences, electronic mail, access to USENET

newsgroups (including privacy groups), and much more. Three conferences are largely dedicated to privacy issues: EFF (Electronic Frontier Foundation), CPSR (Computer Professionals for Social Responsibility), and CFP (Computers, Freedom & Privacy). You get online privacy experts, conferences, updates on legislation, the status of court cases, and a chance to interact with privacy professionals. The WELL's interface is a little clunky, but you won't find more privacy resources online anywhere.

**Subscription: \$15/month, \$2/hr of connect time. 27 Gate Five Road, Sausalito, CA 94965-1401; 415/332-4335 (voice), 415/332-6106 (online registration)**

thing from food irradiation to workplace safety to telemarketing fraud. But there is a special place in its heart for privacy issues; NCL recently commissioned a national survey on workplace privacy. The bimonthly **NCL Bulletin** reports on these and other issues.

**Membership \$20/yr. National Consumers League, 815 15th Street NW, Suite 928-N, Washington, DC 20005; 202/639-8140**

## Privacy International

Like Amnesty International, the two-year-old Privacy International is a global organization dedicated to fostering human rights — in this case, privacy rights. PI's first task is to sound the alarm over privacy abuses around the world and to push for the adoption of practices that "guard against malicious or dangerous use of technology." PI raises awareness about privacy assaults and repressive surveillance practices, coordinates privacy advocates internationally and, like Amnesty International, monitors and reports abuses country by country. Members also receive the **International Privacy Bulletin**, a quarterly newsletter with privacy reports from around the world, legislative updates, and news on related civil liberties issues.

**Membership \$50. Privacy International, c/o CPSR, 666 Pennsylvania Ave. SE, Washington, DC 20003.**

## Other Resources

### Privacy Rights Clearinghouse Hotline

Unlike other phone information services that play back canned tapes, the Clearinghouse is staffed by live, savvy privacy advocates who can answer questions on a range of privacy issues affecting Californians. Funded by the Public Utility Commission and provided by the Center for Public Interest Law at the University of San Diego, the Hotline can answer questions, provide referrals (such as an insider's phone number at a credit bureau), and send you privacy fact sheets on everything from workplace privacy to using cordless phones. Lucid, sharp advice — and it's free!

**Hotline 1-800-773-7748, 10am to 3pm PST, M-F. Free.**

### The Privacy Project: Personal Privacy in the Information Age

This engaging thirteen-part series, originally produced for Western Public Radio, is now available on cassette. The half-hour episodes combine humor, hardnosed advice, and interviews with privacy experts. An excellent introduction to privacy issues. The company also sells audio tapes of recent Computers, Freedom & Privacy conferences.

**\$11/tape, \$75 for all 13. Pacifica Radio Archive, 3729 Cahuenga Blvd. West, North Hollywood, CA 91604; 800/735-0230**

### The Complete Video Library of Computers, Freedom & Privacy

This video collection from various CFP conferences features legal, computer, privacy, and ethics experts debating key privacy issues. See Lawrence Tribe on "The Constitution in Cyberspace," the Secret Service on law enforcement problems, Gary Marx on computer surveillance, the FBI on phone tapping, and more.

**\$55/tape; \$385-\$480 for complete sets. Sweet Pea Communications/Computers, Freedom & Privacy Video Project, P. O. Box 912, Topanga, CA 90290; 800/235-4922.**

## Satellite Surveillance

As a user and critic of many books on technology, I run into one common problem: The writers of the books often forget that their readers don't know what they know. As a consequence, they neglect to explain essential basics. Harold Hough's book avoids this error. It gives you virtual short courses in optics, photography, and several other disciplines necessary to grasp modern satellite "look-down" technology. You really learn what satellites can and cannot do, how their diverse capacities can be integrated to reveal military and industrial information, and how satellites are on the leading edge of exploration on earth (not just in space). Satellite surveillance is one of the fastest-growing businesses in America precisely because it helps other businesses grow. Whatever your business, from geology to insurance to intelligence, Hough's book suggests how you can cash in on this technology — and how you can protect yourself from its prying eyes. —E. G. Ross

• There are four factors that make satellite imagery ideal for agriculture.

1. Satellite images cover large tracts of ground. This makes such imagery ideal for government agriculture agents to monitor districts or for farmers to obtain a profile of their whole farm. Therefore, large trends can be monitored with ease. For instance, a plant parasite or disease can be tracked as it moves, giving farmers an opportunity to isolate and attack it before it progresses.

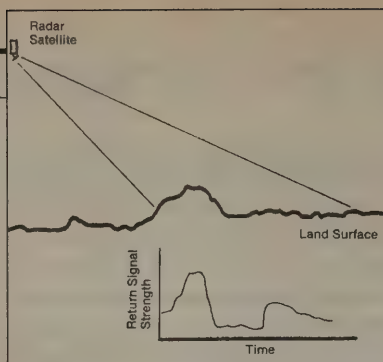
2. Each type of plant has its own reflective pattern. Therefore, two different types of crops that appear to be the same from an aerial picture would look drastically different from a multispectral scanner.

3. Plants change their reflective patterns as they mature. In many cases, these patterns have been studied and analysts can tell

### Satellite Surveillance

Harold Hough, 1991; 196 pp.  
ISBN 1-55950-077-8

**\$21.95** (\$25.95 postpaid) from  
Loompanics Unlimited, P. O. Box 1197,  
Port Townsend, WA 98368



**A radar image of a mountain exaggerates the difference between the mountain and the surrounding terrain.**

## Our Vanishing Privacy

Big Brother isn't a dictator on a huge screen, but a million grocery clerks with bar-code readers. Robert Ellis Smith, publisher of *Privacy Journal* (p. 119), has written a short primer on the threats to privacy in the 1990s and means of defense available to citizens — the technical and legal aspects of drug testing, the abuse of Social Security numbers, genetic fingerprinting, "Caller ID" telephone services, computerized data-collecting, and other new technologies that help people peek into our personal lives. Medical records, credit histories, even the records of grocery purchases, are fodder for those who would invade our privacy not to control us politically, but to sell us products: read the excerpt below and tell me you'll ever be completely comfortable with a bowl of oatmeal again. —HLR

■ Have you heard about "target marketing"? Some call it "database marketing"; others call it "targeting by taste." Whatever it's called, there is a startling change taking place in the way wholesalers and retailers try to get their products in the hands of consumers.

No longer are they content to advertise in mass media — spending millions of dollars for messages that may fall on deaf ears — and hope that customers will find their way to stores where thousands of items are displayed. Manufacturers and many retail outlets now want to target customers directly and lock them into consistent buying patterns.

The way to do this, of course, is to use precise lists for mail or telephone solicitation or to identify customers loyal to your brand and somehow manipulate them into buying your products over and over. The only way to accomplish this successfully is to know everything possible about your customers: their age, income, ethnicity, family size, credit cards, and buying habits.

how far the plant has progressed and if illness or stress has retarded growth. Based on this information, analysts can tell when a crop is ready for harvesting and the potential yield. Farmers can even tell if they will harvest before their neighbors and, therefore, receive higher prices.

4. Satellite images also identify the condition of the ground. An analyst can look over a large area and tell if the fields are too dry or muddy for planting. By carefully monitoring ground condition, farmers can choose their planting time and the right crops.



### Our Vanishing Privacy

(And What You Can Do to Protect Yours)

Robert Ellis Smith, 1993; 136 pp.  
ISBN 1-55950-100-6

**\$12.95** (\$16.95 postpaid) from  
Loompanics Unlimited, P. O. Box 1197,  
Port Townsend, WA 98368

Some target marketers, like Quaker Oats Co., want to know their customers' political and social views. In one massive direct-marketing campaign, Quaker Oats asked customers, including many children, their views on drug testing, school prayer, and gun control, on the theory that their responses indicate whether they are traditionalist or are open to new ideas. Kids and adults who ordered the Cap'n Crunch Dick Tracy Wrist Watch Radio through a Quaker Oats offer in cereal boxes were sent an intrusive questionnaire that asked about these three political issues, plus street address, income, what credit cards the family uses, the names, ages, and preferences of smokers in the household, and who has what diseases in the family. It also asked the wrist-watch radio users to agree or disagree strongly or moderately with the statement: "My dog is like my baby."

The company used the data to market other products directly to the family, based on its preferences. It then tracked the purchases so that it could reinforce patterns by marketing the identical products and allied products in the future. Customers will receive different levels of discounts depending on their family characteristics. Quaker Oats planned to "overlay" television, radio, and newspaper advertising and monitor the varying responses, thus completing the manipulation of the buyer.

## Full Disclosure

Surveillance equipment, surveillance tips, surveillance on a budget, fax interception, wiretapping, dumpster-diving — if it's intrusive, **Full Disclosure** covers it. This zine is so hot it needs a disclaimer:

**WARNING!** *Full Disclosure's* coverage of topics in the electronic surveillance, computer security, privacy and related fields may from time to time cover technological issues that have legal restrictions on their use. The information presented here is intended for educational and informational purposes only. Those desiring legal opinions on the purchase or use of technology are directed to their attorney.

—HLR

### Low Tech Counter Surveillance

We all like to get involved with "my scrambler is bigger than your scrambler" discussions when considering information protection or brag about the Maxwell Smart "quiet room" we are just about to build in the center of the living room but I would estimate 80% of surveillance or information attacks are launched at a level that really does *not* require heavy capital expenditure to defeat. . . .

Here are some simple tips to lower your compromise cholesterol: . . .

2. Wireless phones can be easily and legally monitored at distances of a half mile by anyone with a \$65 receiver and a hi-gain antenna. A few scrambling units are becoming available in the USA.

**G. Gordon Liddy confers with Full Disclosure Associate Editor Debbie Ahmed at Surveillance Expo '92.**



7. Many answering machines can be defeated by a single touch tone, even top end models use a 3-digit guard that can be hacked in a few minutes. Use voice mail with a 5 or more digit security code or rent a voice mailbox (look in yellow pages) from a commercial service. Don't use your real name, give the number and code out to the appropriate people and use it as a message drop.

8. Beat mail covers (where the post office writes down the return address on all mail received by someone) by using a drop *not in your name*, do not file change of address cards.

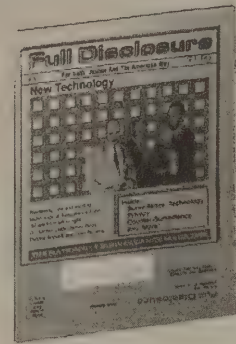
- Another small, inexpensive yet extremely useful piece of test gear is a frequency counter. Let's say you've located a suspicious RF source and wish to monitor it. Instead of hunting all over the dial with your monitor receiver, you can employ a frequency counter to pinpoint its operating frequency within a few Hertz.

For countersurveillance work, they are usually equipped with a short whip antenna

## Full Disclosure

Glen Roberts, Editor.

**\$18/year** (12 issues). Box 903, Libertyville, IL 60048



similar to the sniffer. They are available from numerous sources and accessories such as active prescalers can be had. A sniffer and frequency counter combination is such a useful tool it's hard to imagine doing a sweep without one.

## Gray Areas

*In an age of narrow-casting, two-minute attention spans, aggressive Wired graphics and cyber-styled Mondo fashions, Gray Areas is a refreshingly retro, egregiously eclectic, and easy-on-the-eye look at privacy issues.*

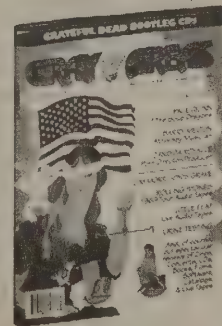
*Imagine progressive sixties survivors listening to a Grateful Dead soundtrack while explaining today's legal impediments to your inalienable rights in accessible yet intelligent prose. Substantial articles, newsnote gleanings and interviews translate the abstruse language of statutes and other assorted legal gobbledygook into voices from above and below the streets. Learn to fake urine tests, encrypt electronic mail and files, discover the ins and outs of search-and-seizure laws, and catch the first whiff of storms massing on various legal fronts. Then, when you've finished safeguarding your privacy for the day, kick back and sample the wide variety of books, concerts, software, videos and zines reviewed. —Richard Hendricks*

- There is a war going on and your constitutional rights are being eradicated. There is no reason to feel guilty or dishonest or immoral for doing whatever you must to pass this asinine test. Remember this as you prepare to defend yourself and your urine. You have choices to make.

## Gray Areas

Netta Gilboa, Editor.

**\$18/year** (4 issues) from P. O. Box 808, Broomall, PA 19008



- The controlling factor in a vehicle search is the degree of probable cause present which thereby determines the extent of search necessary to confirm or deny police suspicions.

So long as the search is limited in scope to suspected items reasonably likely to be in the places searched, the whole vehicle (including closed containers) could be subject to search in many instances.

- Stay cool, be courageous, watch your back, and don't give up the fight.

## The Whole Internet User's Guide & Catalog

Ever browse through an encyclopedia for stories, pictures, explanations? I found myself doing that with this book. It explains how to find and use resources throughout the rapidly growing, worldwide "network of networks" of computers known as the Internet.

The first half tells how Internet works and explains features most people will need. The second half describes services that are new even to people who've "lived" online for years: whois, gopher,archie and others in development. There's a catalog of popular Internet resources (compiled using services described in the book), a brief but helpful glossary, and an invaluable Quick Reference Card.

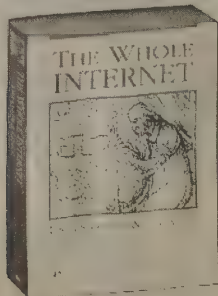
The Internet represents a global, pluralistic community where millions already "work" and "live," but it is one that's difficult to understand on many levels: unfamiliar technology, information overload, globalization and cultural milieu, etc. In bookstores and online forums, you'll find people saying, "Get *The Whole Internet* for a thorough story."

—Paco Xander Nathan

The information resources that visionaries talked about in the early 80's are not just "research realities" that a few advanced thinkers can play with in some lab — they're "real life" realities that you can tap into from your home. Once you're connected to the Internet, you have instant access to an almost indescribable wealth of information. You have to pay for some of it, sure — but most of it is available for free. Through electronic mail and bulletin boards (called "news groups" in Internet-lingo), you can use a different kind of resource: a worldwide supply of knowledgeable people, some of whom are certain to share your interests, no matter how obscure.

### The Whole Internet User's Guide & Catalog

Ed Krol, 1992; 400 pp. ISBN 1-56592-025-2  
**\$24.95** (\$27.95 postpaid) from O'Reilly & Associates, 103 Morris Street, Suite A, Sebastopol, CA 95472; 800/998-9938 (fax: 707/829-0104)



Most network users get their start by using electronic mail (e-mail for short). After sending a few hesitant messages (frequently followed up by a telephone call to ask if the mail arrived), most e-mail users quickly become comfortable with the system. . . . Soon you will find that e-mail means much more than faster letters and memos. . . . You might even decide that your telephone is superfluous.

Remember, there is no official list of Internet resources. Anyone who has an Internet connection can decide to provide some service and put it on-line without telling anyone. So the trick is: how do you find out what's available?

## The Internet Companion

Through global computer networking I can be many places at once, not in geographical, physical space, but in cyberspace. You can do this with the telephone, but it's not the same sensation, it's a one-to-one experience. Computer networks are many-to-many; the sensation you get from conferencing systems and chat lines and MUDs is that you're in a crowded room, a community hall or a party.

Lacking any one concise guide, it's taken me years to work my way into networking and master a few of the technical tools that allow me to work and live as a user — perhaps a citizen — of the Matrix (the set of all computer networks that share mail). With *The Internet Companion* as your escort, you can master the basic tools within a few hours.

The Internet mentioned in the title is the largest of the computer networks, actually a network of networks. With a direct connection to the Internet, you can share mail, text files, graphics, and software, with users of networked systems anywhere in the world.

*The Internet Companion* is a compact, accessible guide to networking on the Internet, an ideal volume for the newbie because it's so friendly. Like all the best guides, it makes two assumptions: that you may know nothing about the subject matter, but that you're not an idiot — just ignorant. Interspersed with the clear, cheerful plain-English descriptions of commands and protocols are anecdotes, quotes, and definitions, which give real-world context. The appendix gives an overview of resources for various aspects of networking. —Jon Lebkowsky

File transfer, the third of the "Big Three" tools, allows files to be transferred from one computer to another. A file can be a document, graphics, software, spreadsheets — even sounds! For example, you may be



### The Internet Companion

(A Beginner's Guide to Global Networking)

Tracy LaQuey with Jeanne C. Ryer, 1992; 196 pp. ISBN 0-201-62224-6

**\$10.95** (\$11.95 postpaid) from Addison-Wesley Publishing Co./Order Dept., 1 Jacob Way, Reading, MA 01867; 800/447-2226

interested in information on Chernobyl from the Library of Congress's "Glasnost" online exhibit of documents from the former Soviet Union. Using file transfer, you can download those articles from the computer they're stored on to your own personal computer, where you can read them, print them out, or clip and incorporate parts of them into a paper you're writing.

One problem is that electronic conversations are missing body language and voice intonation, crucial components of effective communication. Take these elements away and people are forced to "fill in the blanks" when a typed online message doesn't come across quite right. For some reason, people become much more sensitive when they're on line, and they tend to blow things entirely out of proportion — for example, taking a couple of sentences originally meant to be humorous or sarcastic entirely the wrong way. If that happens, everything can go downhill quickly. Instead of asking for clarification ("You were kidding, weren't you?") or just ignoring it, many people — forgetting that they're dealing with another human being on the other end — decide to defend themselves and tell the originator of the message just exactly what they think of him. This outcome is what's known in the business as a flame. If both sides begin insulting each other, it's called a *flame war* (kind of like fighting fire with fire). These digital battles often erupt in "public" and can sometimes be very entertaining to the lurkers.

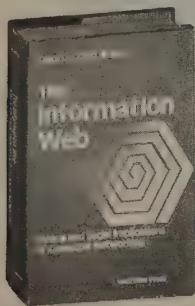
## The Information Web

Subtitled "Ethical and Social Implications of Computer Networking," this collection gives views from several perspectives (those of philosopher, chemist, physicist, among others) on the shape of ethics in computing and technology — today, and in the future.

The papers discuss such issues as formal and implied rights of privacy; whether computer conferencing can be considered a public or private forum; the case of privacy vs. right to know; whether or not computer privacy and personal privacy are legally and/or morally separated by the same technological boundary that brought them together; voting by computer (how it affects democracy; the social effects of voting in such a neutral atmosphere); the ethics involved in computer crime; personal vs. professional ethics (an excellent example: should a chemist, hired to create a deadly disease, be allowed to restrict its use after realizing its lethal potential?); how to handle the voluntary and involuntary disclosure of company/private information.

This book is excellently put together; its contributors not only raise valid points, but they do so in ways that are logical and clear. Far too many aspects of ethics today have proven markedly vague. But perhaps that's just a part of the concept of trying to define an ethic, or ethics, to begin with. —Brendan Kehoe

In the present state of society, in the United States and the other industrial states that will be using networks in the immediate future, it will be necessary to rely on the rule of law in order to have the as-



### The Information Web

(Ethical and Social Implications of Computer Networking)

Carol C. Gould, Editor.

1989; 280 pp. ISBN 0-8133-0699-X

**\$48.50** (\$52 postpaid) from Westview Press, 5500 Central Avenue, Boulder, CO 80301; 303/444-3541

surance that the network environment will be such that it will allow for the "ethical" use of its facilities. But actions based on ethical considerations are not the usual activities of lawmakers. Thus, it will be the responsibility of scientists, and perhaps even of philosophers, to develop a strategy for lobbying the decision-makers so that the laws, rules, and regulations that are enunciated will be based on considerations other than expediency, power brokering, and privilege.

I do not look forward to a society in which science is a commercial item under the control of major industrial corporations. In such a scenario the potentially great breakthroughs in knowledge will be difficult to achieve in the face of pressure for financial profit.

The view of privacy as an intrinsic good as well as an instrumental good is based on an empirical claim about people's basic values. Not everyone may view privacy as a basic value, but I think many do. Moreover, treating people ethically requires respect for their basic values. Thus, for me the

roots of privacy are found in respect for the dignity of people; it is not a value generated, for example, from a hedonistic utilitarian calculation. In fact, this view of privacy is in opposition to classical utilitarian doctrine. Given a choice of two worlds — one world like the thought experiment in which Tom enjoys his clandestine peeking at you and the other world just like it except that Tom doesn't peek — the classical utilitarian may well favor the world in which Tom peeks. In fact, the more Tom enjoys peeking, the better it is for the classical utilitarian!

Privacy has value not merely because it leads to pleasure and avoids pain, though it may do that, and not merely because it enhances autonomy, though it may do that too, but because privacy is something that has value in itself. People value a sphere of privacy in which they have the right to control access to information about their lives. Moreover, once privacy is regarded as a fundamental value and not just as a means to other ends, then privacy concerns are not easily overridden by other considerations. Privacy is on a firmer foundation.

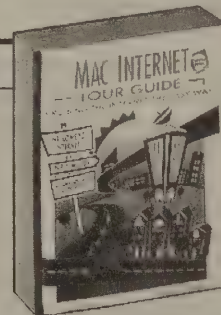
## The Mac Internet Tour Guide

The Internet is a jungle. Even the maps are enigmatic. If you have a Mac and the right kind of Internet connection, however, you have the Internet interface of tomorrow in the form of cool tools like Eudora (the offline mail reader that changes people's lives), Turbogopher (for browsing your way through the Internet gopherspaces around the world), Fetch (a point-and-click agent for finding whatever you find elsewhere on the Net, including other useful software, and transferring it to your desktop), and Stuffit Expander (for decompressing the goodies you find).

The *Tour Guide* is the best way for a Mac user to approach the Net for the first time or for Net vets to turbocharge their Internet use. The book is well-organized, up-to-date, and comprehensive. An accompanying disk includes Fetch, Eudora, and Stuffit Expander, and if you fill out a response card you get two free electronic (text) updates via email. This book/disk/online service is the first of its kind and is the perfect application for cheap-but-effective multimedia.

—HLR

Network news, e-mail, and FTP are great tools for specific tasks. As you've seen, it's simple enough to use a program like



### The Mac Internet Tour Guide

(The Friendly Handbook for Navigating the Internet)

Michael Fraase, 1993; 290 pp.

ISBN 1-56604-062-0

**\$27.95** (\$32.45 postpaid) from Ventana Press, P. O. Box 2468, Chapel Hill, NC 27515; 800/743-5369

Eudora to dash off an e-mail message to someone, and it's a snap to use Nuntius to look for Macintosh-specific information in someplace like the comp.sys.mac newsgroups. Even finding and downloading a specific file from an FTP archive is a cinch if you're using Fetch. These programs and Internet resources are all specific tools for specific jobs.

But what if you don't know exactly what you're looking for, or only have a broad idea about a topic of interest? What if you just want to surf through the oceans of information available on the Internet? That's where Gopher comes in.

## The Catalog of Catalogs III

Twelve thousand catalogs of everything are here along with access information so you can send for 'em all, nyahahaha (but you'll need to rent a semi for a mailbox). Temptation at its most tempting. —J. Baldwin

■ **Farris Machinery**, 309 N. 10th, Blue Springs, MO 64015: Free information • Space-saving combination of power tools that plane, mold, and mortise. 800-872-5489; 816-229-3055 (in MO).

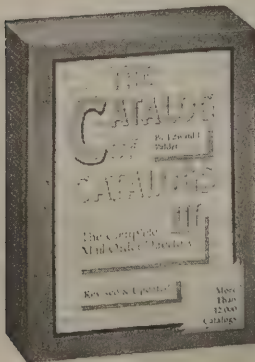
■ **B. J. Alan**, 555 W. Federal St., Columbiana, OH 44408: Catalog \$1 (refundable) • Class C "backyard" fireworks at discount prices. 800-321-9071.

● **The Ribbon Outlet, Inc.**, 3434 Rt 22 West, Ste 110, Summerville, NJ 08876: Free catalog • Over 3000 varieties of ribbons and trims. 800-766-BOWS.

■ **KAPS Vending**, 25137 Lavina Ct., Helmet, CA 92344: Free price list with long SASE • Gum ball machines, globes, parts, decals, and gum balls and candies.

● **Topiary, Inc.**, 41 Bering, Tampa, FL 33606: Free brochure • Wire and stuffed wire forms in geometric and animal shapes. 813-837-2841.

■ **Lynn H. Steele Rubber Products**, 1601 Hwy. 150 East, Denver, NC 28037: Catalog \$1 (Specify make of car) • Reproduction rubber parts for Cadillac, Packard, Chrysler, Chevrolet, Buick, Oldsmobile, and Pontiac cars, and Chevrolet trucks. 800-544-8665; 704-483-9343 (in NC).



### The Catalog of Catalogs III

(The Complete Mail-Order Directory)

Edward L. Palder, 1993; 516 pp.  
ISBN 0-933149-59-X

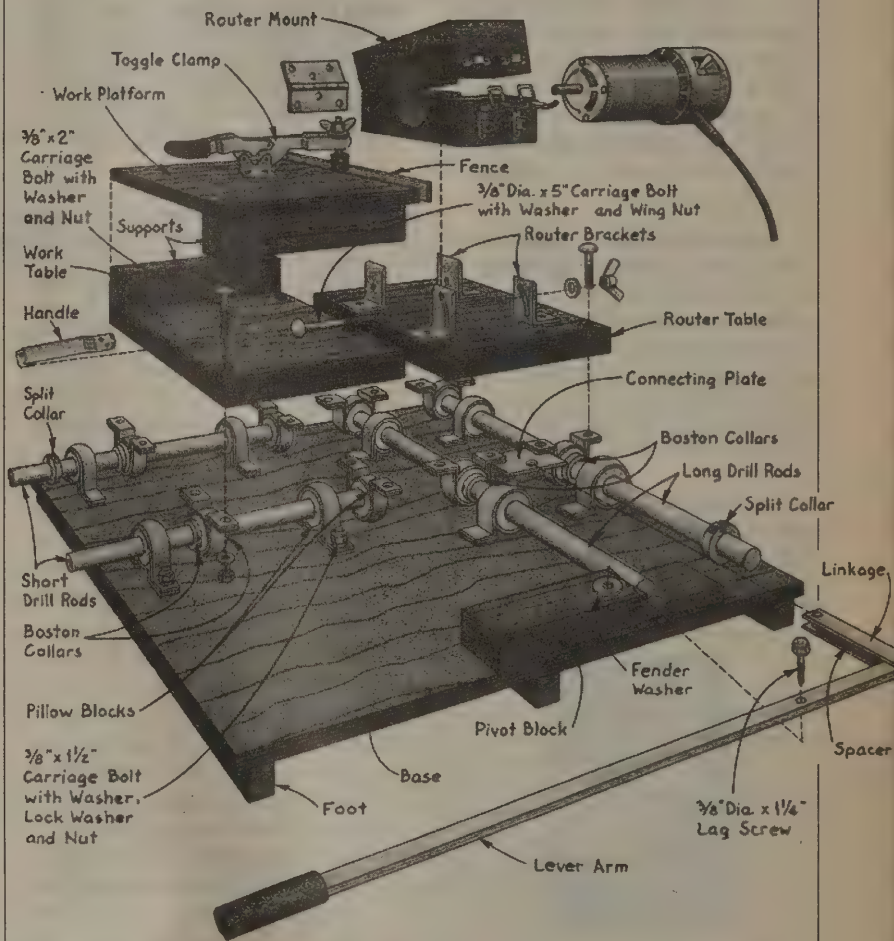
**\$19.95** (\$23.45 postpaid) from Woodbine House, 5615 Fishers Lane, Rockville, MD 20852; 800/843-7323

## (...) Jigs, Fixtures and Setups

As woodworkers graduate from Birdhouse 101, they often become involved in projects requiring lots of identical moves on common shop machinery. This book shows how to fabricate the hardware necessary to achieve that worthy goal. It's straightforward stuff, craftily presented, but beginners probably should do those birdhouses first.

—J. Baldwin

**Mortising machine — designed by Greg Glebe.**



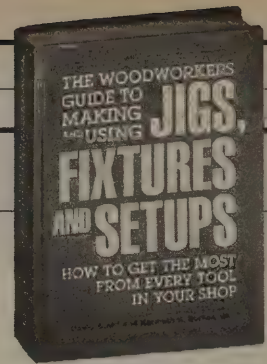
● The mortising machine looks complex, but it really is quite simple to assemble. An organized woodworker could do it in a few hours. You can buy a machine like this for about \$600. As of this writing, the shop-made version will cost about \$150. . . .

The mortising machine shown here em-

## The Woodworkers Guide to Making and Using Jigs, Fixtures and Setups

David Schiff and Kenneth S. Burton, Jr., 1992; 450 pp. ISBN 0-87596-137-1

**\$26.95** postpaid from Rodale Press, 33 E. Minor Street, Emmaus, PA 18098; 800/441-7761

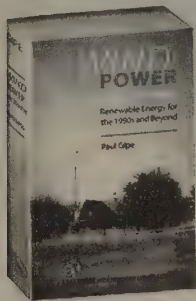




## Wind Power for Home & Business

This is what I call a fourth-generation book. The first ones on a subject usually reprint or rehash a past endeavor. The second wave is authored mostly by experimenters, zealots, and (occasionally) charlatans, who have discovered a good thing and wish to win converts and buyers. The third group consists of latecomers climbing on the bandwagon. These tend to cool out the hype of their predecessors, but usually offer little that's new.

Then comes the fourth generation, typified by this fine book. It collects and organizes decades of experience — good and bad, funky and slick. Names are named. Facts, tips, legends, physics, and effective practice are augmented by tables, illustrations, formulas, and a source list. Economics are particularly well attended. All the book-learning a wind-harnesser needs to know, and most welcome it is, too. —J. Baldwin



### Wind Power for Home & Business

(Renewable Energy for the 1990s and Beyond)

Paul Gipe. Chelsea Green Publishing Co., 1993; 413 pp. ISBN 0-930031-64-4

**\$35** (\$40.95 postpaid) from Real Goods Trading Corporation, 966 Mazzoni Street, Ukiah, CA 95482; 800/762-7325

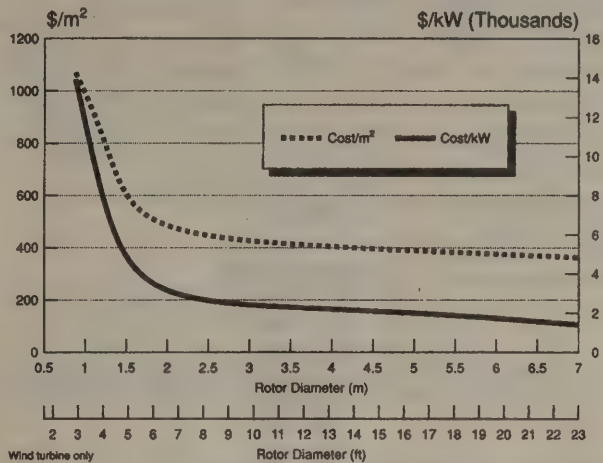
During the early 1980s many American-designed wind turbines that operated at high speeds were installed. These machines were not only noisy, they were also trouble prone. Danish designs operating at much more modest speeds eventually won more than half the California market. Like Jacobs before them, the rugged Danish designs opted for lower speeds to reduce wear and tear. The Danish turbines typically drove a six-pole generator at 1200 rpm, while their American competitors used four-pole generators running at 1800 rpm. Today none of the early U.S. designs are still being built.

If you don't want to go through the trouble and expense of performing a site survey,

there's one avenue left. . . .

You can install a micro wind system for about \$1500, not much more than the cost of NRG's TallTower™ and recording anemometer. Agreed, this isn't a low-cost

way to test the wind, but it works. What you get is an operating wind system. You gain hands-on experience and you learn exactly what you want to know: how well a wind machine will perform at your site, that is, how much energy it will generate.



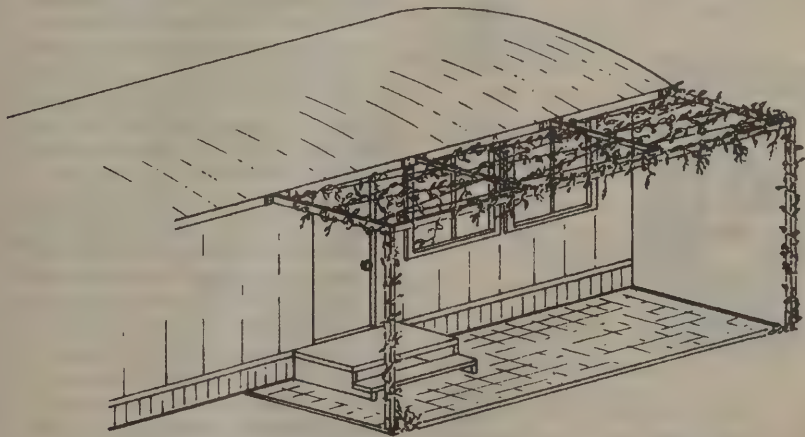
**Small Wind Turbine Cost Relative to Size (wind turbine only)**

**Relative cost of small wind turbines. The relative cost of small wind machines generally declines with increasing size.**

## Your Mobile Home Energy and Repair Guide

Nearly 13 million of our citizens live in mobile homes, mostly because the purchase price or rent is less than that of more substantial housing. Alas, many mobile homes are egregious energy hogs, undermining their initial economies with high overall operating costs. This updated book gives you the specialized

knowledge needed to avoid the worst gobblers, and how to upgrade and repair the one you have. The book also makes an inadvertent case for the mass-produced, high-performance house that remains an intriguing, unfulfilled possibility. The need is there for sure. —J. Baldwin [Suggested by Paul Richards]

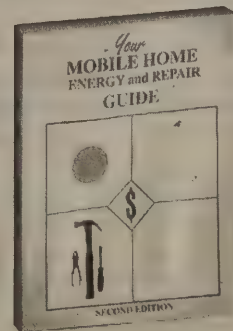


**A trellis covered with climbing vines is a very effective shading device because it stops solar heat before it reaches the home.**

### Your Mobile Home Energy and Repair Guide

John T. Krigger, 1992; 138 pp. ISBN 1-880120-02-X

**\$15.95** postpaid from Saturn Resource Management, 324 Fuller Avenue/S-B, Helena, MT 59601-9984; 800/735-0577 (fax 406/442-1316)



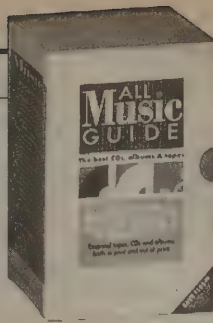
## All Music Guide

It's like a World Almanac of recorded music — full of nifty facts and labels, but with a unique assortment of time-capsule histories of musical genres.

Editor Michael Erlewine based the book on a database of over 100,000 records, tapes and CDs, and gives a concise, punchy overview of the best recorded music in twenty-three categories.

Strong points are its completeness and thoroughness — lots of rarely documented categories (women's music, gay music, rap), and many obscure but important sub-genres (Hawaiian music, marching-band music).

Some of the 23,000 items reviewed are currently unavailable, or not on CD yet



— there is no compromise here on what's good. The reviewers are experts in their respective categories.

This book fills an important gap — I can't imagine a serious music lover, record store, radio

station or library without a copy. And twenty bucks seems like a steal for almost 1,200 pages of useful fun.

—Cliff Martin

### All Music Guide

Michael Erlewine and Scott Bultman, Editors. 1992; 1,176 pp. ISBN 0-87930-264-X

**\$19.95** (\$25 postpaid) from Miller Freeman Publications/Order Dept., 6600 Silacci Way, Gilroy, CA 95020; 800/848-5594

## The Life and Legend of Leadbelly

At last: a scholarly, comprehensive, yet accessible study of one of America's greatest folksingers, songwriters, and mythical characters. Huddie Ledbetter (1895?–1949) syncretized, composed, made up or popularized such songs as "Good Night Irene," "Rock Island Line," "Midnight Special," "Take a Whiff On Me," and "Pick a Bale of Cotton."

This unlikely amalgam of work songs, blues, field hollers, children's games, cowboy songs, even Appalachian ballads, laid the foundation for much that was truly American in folk, rock, and pop music.

Dancer, singer, "king of the twelve-string guitar," womanizer, family man, convicted/

pardoned/paroled murderer, civil-rights propagandist, paterfamilias to the forties NYC folk scene, Leadbelly was a walking history of folk roots and the singular expression of a new cultural wavelength.

—William D. White

Faced with the prospect of making a long, tiring journey alone, Lomax recalled Leadbelly's skills. He was a good driver and mechanic — his experience working for the Houston Buick agency served him well here — he could help with the heavy ma-

chine; and, best of all, he could serve as liaison with the African American singers and prisoners Lomax was wanting to record. All in all, it sounded like a good idea. After he got Leadbelly's last letter, he wired Leadbelly to meet him at the Plaza Hotel in Marshall on September 22. "Come prepared to travel," he said. "Bring guitar. . . ."

Huddie did, and found Lomax at the hotel experimenting with his recording machine. . . . He asked his new employee if he was carrying any weapons, having been worried about Huddie's reputation of carrying a pistol. "Only this knife, Boss," Huddie replied, bringing out a razor-sharp knife with a long blade. Lomax took it and balanced it in his hand. Down in Austin, he said, he had a wife and daughter, and hoped to live a long time for their sakes. "Whenever you decide that you are going to take my money and car, you won't have to use this knife on me. Just tell me what you want and I'll give it to you without a struggle." This direct, pragmatic response appeared to startle Huddie. "Boss, suh, don't talk that way. . . . I'se yo man. You won't ever have to tie your shoes again if you don't want to. I'll slip in front of you if anybody tries to shoot you. I'm ready to die for you."

This somewhat reassured Lomax.

### The Life and Legend of Leadbelly

Charles Wolfe and Kip Lornell, 1992; 331 pp. ISBN 0-06-016862-5

**\$25** (\$27.75 postpaid) from HarperCollins Publishers/Direct Mail, P. O. Box 588, Dunmore, PA 18512; 800/331-3761

## A Meeting by the River

After spending all day working on a film score in Los Angeles, bottleneck guitar hero Ry Cooder drove to Santa Barbara for his first meeting with Indian slide guitarist master V. M. Bhatt. The pair sat down and began improvising; the result is a lovely cross-cultural musical experience. The guitarists support one another, take turns leading the music, work into duets. A rhythm section (Cooder's fourteen-year-old son Joachim Cooder on dumbek and Sukhwinder Singh Namdhari on tabla) provides a steady foun-



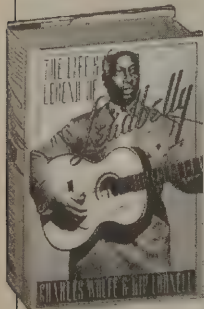
ation over which the two guitarists build all manner of airy, slinky melodic ideas based on the sound of glass bottleneck sliding on steel strings.

Bhatt is one of a number of Indian slide guitarists; like the others he has built his own instrument, a mohan vina, which features very Indian-sounding sympathetic strings (they vibrate differently depending on which of the main set of strings Bhatt plays). The album's four pieces are long — the shortest being the nearly eight-minute "Isa Lei" — yet they seem to fly by. The music is improvised but each tune establishes its own mood, conjuring up aural images of everything from ragas to Delta blues. More than recalling some other form, the album offers a new style even for Cooder, who has over the past thirty years steeped himself in everything from Rolling Stones' rock to Flaco Jimenez' Norteno accordion music. Here he takes a different tack, meshing with Bhatt's own style, the two players inspiring each other in a relaxed setting. Not bad for their first meeting. —Larry Kelp

### A Meeting by the River

(Water Lily Acoustics #29)

**\$17** (\$21 postpaid) from Roundup Records, 1 Camp Street, Cambridge, MA 02140; 617/661-6308



## Financial Report

To help us through the cash crunch of the last few months, we have had to resort to the magazine publisher's eternal safety net: advance renewals — that's why the subscription liability has increased so dramatically.

As for the change in fund balance: we know that we won't survive if the trend continues, and we're making our best effort to reverse it (see Gossip, p. 132). —Marly Norris

### Balance Sheet: March 31, 1993

<b>Assets</b>	
Cash	32,870
Accounts Receivable	78,222
Inventory	5,142
Fixed Assets Less Depreciation	14,802
Other Assets	42,100
<b>Total Assets</b>	<b>173,136</b>
<b>Liabilities</b>	
Accounts and Contracts Payable	64,924
Subscription Liability	550,706
<b>Total Liabilities</b>	<b>615,630</b>
<b>Fund Balance</b>	<b>(442,494)</b>

### Income & Expenses: 1st Quarter 1993

<b>Income</b>	
Subscription Income	121,254
Back-Issue & Single-Copy Sales	3,153
Newsstand Sales (after Returns)	36,891
Book & Product Sales	8,962
Royalties	1,864
List Rental	4,195
Unclassifieds	3,307
Contributions	6,167
Other Income	1,384
<b>Total Income</b>	<b>187,178</b>
<b>Expenses</b>	
Payroll & Related Expenses	104,539
Printing WER	24,970
Writers & Illustrators	7,135
Editorial/Production Expenses	2,102
Fulfillment/Promotion Expenses	40,355
Newsstand Expenses	5,011
Book & Product Sales Expenses	7,599
Rent, Maintenance & Utilities	15,639
Insurance & Taxes	(253)
Office & Computer Supplies	2,964
Depreciation	2,169
Postage & Phone	2,086
Other Expenses	3,003
<b>Total Expenses</b>	<b>217,320</b>
<b>Net Change in Fund Balance</b>	<b>(30,143)</b>

## IT'S NOT TOO LATE TO BE A CATALYTIC CONVERT

We're trying to bring a *Millennium Whole Earth Catalog* into existence, and you've been sending the ideas, connections, expertise, and money we requested to help make it possible. We're thrilled and inspired. Every day, something new and useful arrives in an envelope or via email or the fax machine. Some days, you astound us with your knowledge and your generosity. Like the day a \$10,000 check arrived from an anonymous, just when we were wondering how we were going to hire the people to start ordering the thousands of books, magazines, and software packages we will need to evaluate.

We're also hee-hee-heeing as we put together *Catprod*, our little zine for Catalysts only, featuring the kind of things you'd never see in *WER*. It's not too late to get in on it.

Don't stop now! You've inspired and enabled us to do the things we need to do to get this project started, even though we haven't yet received our publisher's first check. However, we still need your ideas, connections, expertise, and money. For those of you sending green energy, this is what it takes and what you get:

**\$25:** You'll receive three issues of *Catprod*, a photojournal of the *Catalog*'s construction process.

**\$60:** You get *Catprod* and a first-off-the-press copy of the *Millennium Whole Earth Catalog*.

**\$100:** *Catprod*, a *Catalog*, and a fetching Whole Earth Catalyst t-shirt.

**\$500:** All of the preceding stuff, plus a line (100 characters) to be printed on the last page of the *Catalog*. What have you always wanted to say to the whole earth?

**\$1000:** All of the above, and a *Catalog* personally autographed by all staff members, and ten more *Catalogs* to give to your friends.

**Other:** How rich *are* you? Or, if you've got materials or services we could use, please elaborate. Donations are tax-deductible. ☺

## Updates & Corrections

From *WER* #79, p. 99: *Interrace* has a new address and subscription rate: P. O. Box 12048, Atlanta, GA 30355; \$24/year (10 issues).

From *WER* #67, p. 116: Michael Olaf/The Montessori Shop's new address is: P. O. Box 1162, Arcata, CA 95521; 707/826-1557 (fax 707/826-2243).

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Become a Supporting Subscriber.**

WHOLE EARTH REVIEW takes the noble if possibly unrealistic position that it serves its readers better by accepting no display advertising. We need your financial support to continue to present challenging, illuminating, sometimes irritating ideas.

Becoming a Supporting Subscriber is a relatively easy way for you to support this position and reap the rewards. Choose an appropriate level of support, and fill out the form below. We will acknowledge your generosity with the following benefits:

1. You get your WER fast, by first-class mail, protected by an envelope.
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  3. You get acknowledged in the magazine (unless you prefer otherwise).
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- **Retaining Subscriber** (\$50/year): Acknowledgment in one issue.
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- **Maniacal** (\$1,000/life): A subscription for as long as you — or we — live.
- **Angelic** (\$5,000/life): Two copies of every Whole Earth book or product, until the end of your life or ours.
- **Perpetual** (\$10,000/life): A set of (available) back issues, two copies of every Whole Earth book or product, and a subscription that goes on forever and can be willed to descendants or otherwise passed on to others.

Any level of support that you can give will help keep us publishing. Thank you in advance for your generosity.

**All right, you can have a horsie ride.**

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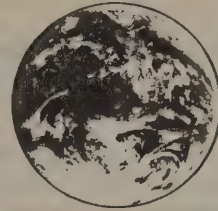
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**Stewart Brand**  
Founder

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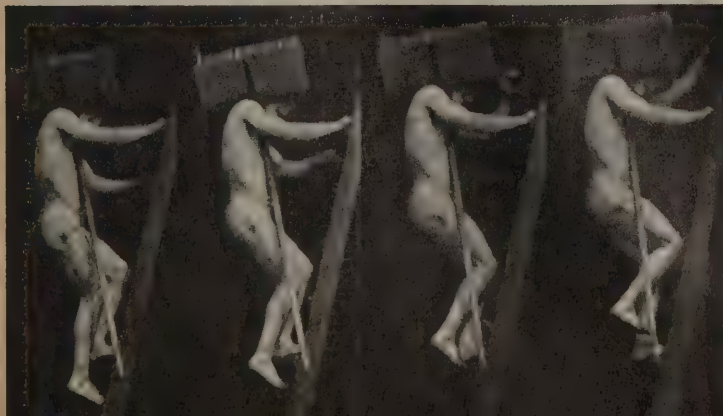
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## Gossip (Concert Version, with Drum Solo)

What the heck is really happening at Gate Five Road? Readers who follow the masthead will have observed that old hands are leaving, fresh recruits are arriving, and job descriptions are mutating at a befuddling pace. The previous editor took a temporary leave three years ago. The guy who took over as temporary editor has just returned after taking his own nine-month leave. The twenty-fifth anniversary issue triggered a censorship crisis, and the mock-censored "Gossip" in the same issue confused people even more. At the same time, we are telling the world that we're putting together a new version of the Whole Earth Catalog, but that we need more money to do it. Where is Stewart Brand in all this? And what happened to executive directors Kelly Teevan and Jon McIntire and half the Point Board?

Readers tell me they want to know what is happening and what is going to be happening with Whole Earth Review. This is how I see it; others see it differently; I am willing to present dissenting views in future issues, as long as we don't degenerate into the Omphaloskeptic Review.

There's a lesson in whole systems in here somewhere.

Where did all this turbulence originate, and — more importantly — where is it leading? For a long time, I was daunted by the difficulty of pinning down the historical origins of present crises with any hope of objectivity, and I am painfully aware of the unfairness of presenting only my point of view on a complex situation in which differences of opinion have contributed to the turbulence. Recently, I began to understand that one concrete event changed the entire system at Whole Earth — an event that made a crucial difference in the human organization that creates this magazine and keeps it in business, an event that has been invisible to our readers.

In retrospect, I can see that the loss of the daily volleyball game was a key turning point.

Every afternoon, ever since CoEvolution Quarterly moved to Gate Five Road in

1975, everyone associated with the Catalog or the magazine or the WELL emerged from their offices and assembled outside (on company time) for a game of volleyball. Fun was had, bodies were exercised, subconscious and not so subconscious conflicts were acted out. Information — progress reports and internal diagnoses and nascent plans — was shared between effortful grunts. Or so I'm told. Everyone did one thing together every day, and what they did was play. I asked Stewart about the beginning of the volleyball games. This is what he told me:

"I started volleyball at the Menlo Park building as soon as we had a big enough staff (1969), on the theory that it would build esprit and character, which it did. We didn't have it while on Napa Street Pier ('73 to '74), but I revived it upon arrival at Gate Five Road ('75, I believe). About 1984 or 5, probably following the financial wrenchings of the Software Catalog, a business manager pointed out that paid volleyball was costing us \$10,000 a year or something. In my early dictator days I would have ignored that, but as an employee-empowerer, I went along with his suggestion to convert volleyball time off the payroll. The games continued but went into an irreversible decline. I regret and take the blame for the decision."

Ideas that seem like perfectly good ideas, even sober and responsible ideas like saving \$10,000 a year on volleyball hours, can turn into mistakes, clearly visible through the lens of retrospect, years later.

I never attended any volleyball games. The volleyball court had been turned into a deck and parking lot by the time I arrived, in 1990. At the beginning of my tenure, I tried to find ways to make up for the deficiency. Instead of having a standard editorial meeting, I brought supplies for making and decorating life-masks. One time we painted hats during a staff meeting. Eventually, we would have complete costumes, and then we could start practicing our kazoos, and ultimately we would have a Whole Earth Masked Marching Band.

That was my theory, but I failed to keep

up the momentum. I regret and take blame for that failure. We lacked a regular communion ritual, and that lack led to trouble. We had staff meetings and staff lunches, but without the daily volleyball game, we began to have problems communicating among ourselves. The "editorial" office and the "business" office began referring to one another as "the other side of the parking lot."

The business side and the editorial side are the two hemispheres of any magazine's brain. We've always been weird in this respect. Stewart Brand started CoEvolution Quarterly with the conviction that the magazine should print whatever the editor saw fit to print. WER remains one of the few magazines that is completely at the mercy of the editor's whims. This is enough to drive the business office of any normal magazine into shock, and Whole Earth compounded the problem by never running a normal magazine business.

In the traditional magazine business, you make money (two-thirds of it) by delivering your audience to advertisers, then you use the money you make from advertising to "buy" new subscribers of the correct demographic flavor, via direct mail. Unfortunately, traditional direct-mail methods work well only if you can fit your readers into a well-defined niche. An eclectic readership refuses to fit into a narrow niche.

Despite breaking all the rules, Whole Earth Review (née CoEvolution Quarterly) has survived for almost two decades because a tenaciously loyal, unfailingly outspoken, and consistently creative network of allies has not allowed the enterprise to die. A mostly invisible community has kept us alive through hard times. And Stewart Brand hit a couple of jackpots with WEC advances that bailed out the magazine at crucial times.

There is no "them" in the Whole Earth business; it's all "us." The community catalyzed by the first Catalog is itself an example of the "whole systems" that the Catalog's readers were seeking to understand. Readers are contributors, and writers are loyal readers. More than any other magazine, our readers have a fierce sense of ownership: they don't hesitate to give us their suggestions, critiques, reviews,

articles, and money, and they never fail to let us know when they feel ill-served.

The business-editorial conflict posed a much less dangerous potential for conflict when Stewart Brand was in charge of both sides of the enterprise. This isn't the place for a complete history of *Whole Earth*, so I'm going to skip over more than a decade I know little about, when Anne Herbert, Jay Kinney, and Art Kleiner were editors. For

seven years before I showed up, Kevin Kelly was both publisher and editor. Kevin has told me that when he had to bust the budget, speaking as editor, he'd have to argue with the publisher part

of himself. The ground rules are much simpler when the person you argue with is yourself. And the arguments are less grim when your organization is trying to give money away instead of trying to make more money while the world is in the grip of a killer recession.

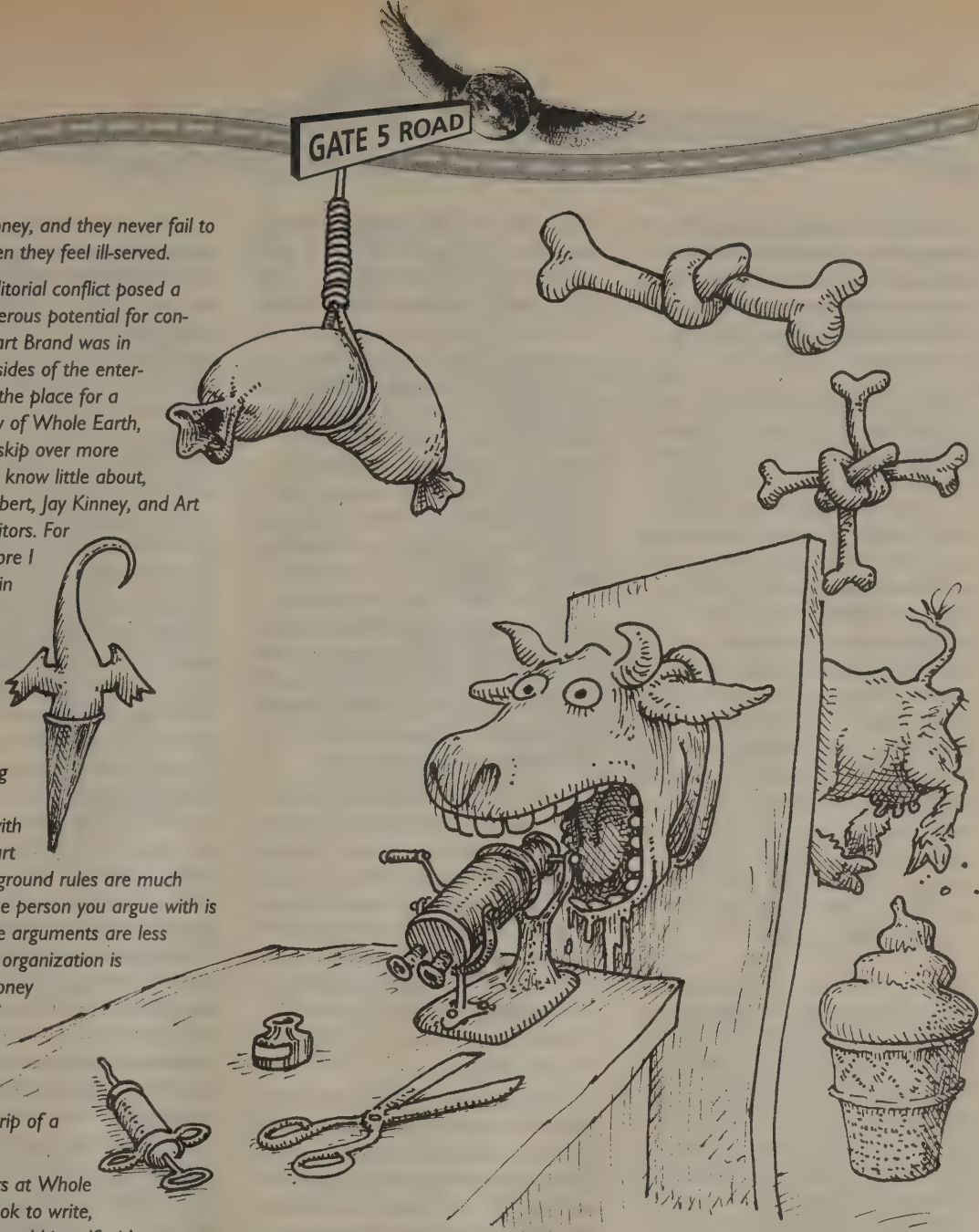
After seven years at *Whole Earth*, with a book to write, Kevin Kelly replaced himself with Howard Rheingold. The arrangement was supposed to last a year, but Kevin's book project stretched out longer than he had anticipated, and I liked the job more than I thought I would when I took it. That part just happened. It wasn't in the original plan. At the beginning, a decision was made by Kevin and myself — a decision that multiplied the impact of the loss of the volleyball court. I could be editor for a time, we agreed, but I didn't want to become publisher. I am neither inclined toward nor experienced in the business side of magazine publishing. I agreed to work for a modest-enough amount of money (\$25,000/year) to make it possible to hire somebody else to take care of the business side. That person would not be my

boss, but my partner. When you create two top-level managerial positions where once you had one position, don't be surprised when conflict erupts. It seems obvious now.

One of the reasons the *Whole Earth* enterprise continues to exist against all odds is that the first *Whole Earth* Catalogs were so fantastically successful. They were Stewart Brand masterpieces, yet part of the genius of the first WECs was that they were works of many voices. Stewart was more than a soloist. He was a bandleader. From the beginning, WEC and then *CoEv* was the Stewart Brand

show, with the help of a community of friends and co-adventurers.

The early publications made huge amounts of money by anybody's standards, and Stewart set an immediate precedent of spending it — giving it away if necessary — on multiplying cultural leverage. The original intention of the Point Foundation was to give away money — "spend the capital and the interest" — to other people who were trying to change the culture. Look through issue number two of *CoEvolution Quarterly*, from the summer of 1974; you'll find some intriguing reading in the three pages of



Illustrations are from notes taken by James Donnelly during WER staff meetings.

small type describing all the organizations Point endowed in the old days. Richard Nilsen, our senior editor and land use expert for the past twenty years, was one of the first grantees — for a community ecology center.

Stewart Brand likes to start things and then let them sink or swim. (He handed the magazine over to the Black Panther Party for the third issue.) Don't forget — he was a Prankster before he was a Whole Earther. By the late 1980s, Stewart was occupied with other ventures, and the WELL and WER seemed to manage to exist without his constant attention. But, as spectacularly successful Founders tend to do, he cast a long shadow. He was consulting in foreign countries or writing books half the time, but during the other half, he was physically present, working in his office in the dry-docked shrimp trawler above Kathleen O'Neill's garden. When I started as editor I opened the gate to that garden and walked past Stewart's boat every day. I never walked up those stairs to talk about Whole Earth business until after I had resigned.

At first, I just wanted to make sure that I wasn't influenced, even unconsciously, by Stewart's judgement. I wanted to find my own way of cooking up this publication four times a year. I never went to editor school; I never had a boss, and I never will. Even if he didn't want to be that (and he never showed a sign that he did), I managed to deliberately not consult Stewart about the magazine or internal political conflicts. It turned out that Stewart liked the way Howard Rheingold was doing the job as editor, and he has stood up for me at every confrontation. But I have always presumed that Stewart's backing was based on the editorial content of the magazine, not on the cumulative half-hour or so we had spent talking during the years of my editorship.

I also assumed that Stewart wanted the organization to fly on its own and, I presumed, would be happy for others to take up leadership roles. The first time I encountered a meeting of the entire organization, it certainly seemed to me that the whole idea was to sail the enterprise far beyond the days when it had been the Stewart Brand Show.

In January 1990, the whole Point Foundation tribe — WELL and WER staff, and some Point Foundation directors — met for a two-day retreat at the San Francisco Zen Center's Green Gulch Farm. The directors were there for one of the two days, and so was I, as the incoming editor. Most of the faces I saw were new to me. The meetings were facilitated by Richard Steckel, who specializes in helping non-profit organizations become more effective. At that time, Point staffers knew the organization needed to be more effective, and said they were ready for changes. WER had survived much longer than most magazines, but its financial health was fragile. When I took the job as editor, several friends who were not employed by the magazine warned me that I wouldn't even have the four issues I thought I was getting before the business folded.

Two important ideas from that meeting stand out in my memory today. I remember Steckel's advice to us about navigating out of the financial doldrums: our source of value, we agreed, is the larger network of dedicated correspondents and the smaller network of uniquely skilled editors, and the trust we have built up among our readers over the years. Together, we have been co-evolving a toolkit for independence.

No other editor on earth benefits from so much free and deeply devoted assistance from his readers. People feed us good information that other magazines have to pay people to find, and we have evolved a system for evaluating and presenting that information. Here is where Steckel brought to our attention a crucial leverage point: we package, distribute, and profit from only a small portion of the information our network hunts, gathers, and evaluates. The quarterly magazine and the Catalogs that came along once or twice a decade were our only means of distributing tools and ideas throughout the network of supporters, and our only way to make enough money to stay in business. We agreed to find new ways to package our information.

At Green Gulch in 1990, we agreed that we wanted to hire an executive director — not only because the editor was not willing to be the publisher, but because we all wanted someone to integrate our hu-

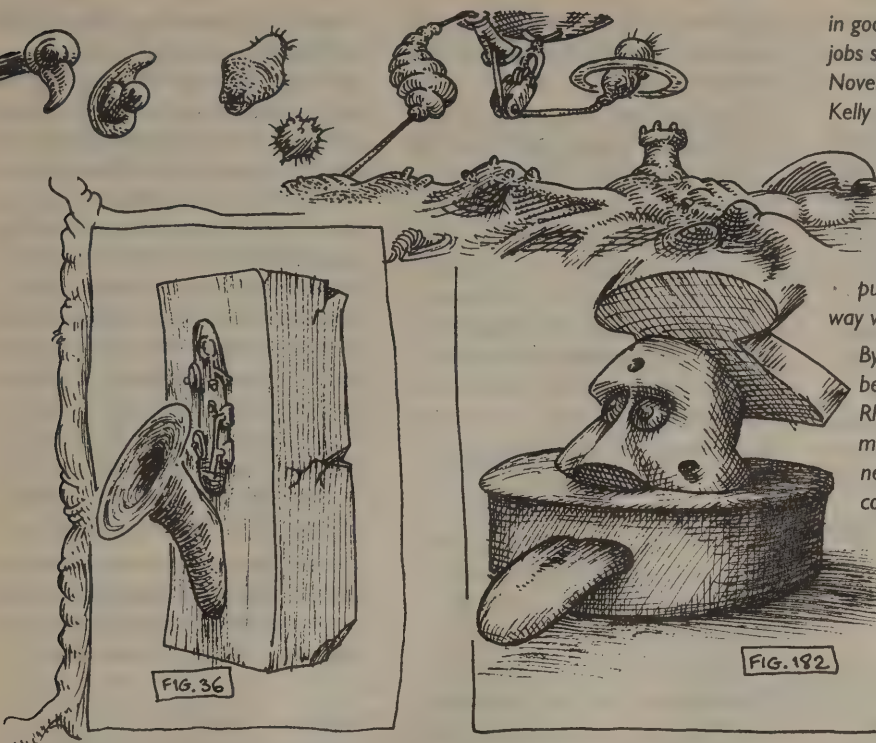
man network/creative staff/business management/gathered-and-evaluated information/multimedia experience/online community, and make this richly creative but heretofore highly unplanned collection of experiments into a culturally and financially healthy organization. We would continue doing what we do best, but our products would reach more people in more ways, and we would get more money to keep doing it. Maybe there would be a chance of long-overdue raises for the staff, and the possibility of paying our contributors more generously.

So Kelly Teevan, the executive director hired by the Point Foundation, came aboard. He had been a Harvard undergrad, a Stanford M.B.A., a successful Wall Street trader, partner in a family painting business, and a long-time reader of Whole Earth publications. He took an order-of-magnitude cut in salary to help an idealistic organization get its feet on the ground. He and I started our jobs at the same time. I didn't make his job easier. Nobody had really ever tried to examine our books and our cash flow and our track record and pull together a real business out of these ancient entangled enterprises, and Kelly worked long hours to transform us from a band of cultural entrepreneurs who lurch from financial miracle to financial disaster into a stable business with goals and plans for achieving those goals.

However, the board had never set out to build a stable business with business goals and strategies, and even after hiring Kelly, they seemed ambivalent about how much of a business Whole Earth ought to be, and how much of a pure cultural mission it should remain, even if remaining true to the mission spelled financial disaster. I was at a couple of Point Board meetings at Kelly's invitation — I seriously believe I was invited for entertainment value — and I not only sensed but actively fed that ambivalence. To make matters worse from the executive director's point of view, it isn't easy to plan around an editor who insists on total control of the magazine's content, is as likely to be in Tokyo as Sausalito, doesn't like long meetings, and refuses to predict what he's going to do from year to year.

My instincts told me immediately that





in good conscience promise to do both jobs simultaneously and excellently. In November 1991, after much angst, I told Kelly to look for a new editor to move into my office no later than June 1992.

I was surprised at how hard it was to let go. As Jon Carroll, guest editor of *WER* #78, said to the rest of the team during my absence, putting out a quarterly magazine the way we do is "group art."

By late February, the Point Board had become concerned about the post-Rheingold editorial direction of the magazine, and about the fact that no new enterprises seemed to be forthcoming. If Kelly had come up with any viable candidates for the editor slot after my resignation, I believe events would have turned out very differently. But neither I nor any of the board members had been presented with candidates for the editor's job. It looked like Kelly was determined to control the

selection process, as he had a right to do. But many on the editorial side had lost faith in his leadership, and so had the board.

Kelly resigned in March. Whether or not his vision for the organization was sound — and I understand now how many of the elements of his plans might be necessary steps to greater financial security and wider influence — Kelly failed to convince the board to trust his judgement in determining the future of the organization. Kelly felt betrayed by an organization that didn't know what it wanted from an executive director. The organization itself was suffering the effects of Founder's Syndrome: Stewart Brand, who created it all, cared deeply about the future of *WER* and the *WELL* and other Point activities, but the organization was struggling to fly on its own. Stewart had other things to do.

After I resigned, I walked up those steps to Stewart's office and talked with him about the future of the magazine as I saw it. I felt I owed him an exit interview, and regretted having lost the daily opportunity to talk with one of the more interesting minds on the planet. When Stewart asked me what I would require to stay on as editor, to take a leave instead of resigning, I told him that we would have to find guest

Kelly and I would never be looking at the same universe when we looked at the mission of the Point Foundation and its enterprises. I didn't know then that when you get angry in an organizational conflict, you lose, because your anger bespeaks your prior failure to persuade or convince. I think Kelly and I both have to take responsibility for not forcing ourselves to communicate daily. Perhaps we should have hashed things out informally with Stewart early in the relationship, or maybe I should have forced an unambiguous showdown about the direction of the organization and debated Kelly in front of the board. By trying to avoid a "him or me" confrontation, I can see now how I set the stage for an equivalent event. It's amazing how easy it is to miss these crossroads when they are happening to you.

Kelly's side of the story, as I imagine he might tell it, would point out that Howard is a free spirit and a prima donna who refuses to take responsibility for the business of keeping the magazine afloat. He spends his time on the parts of the job that attract him and avoids the less pleasant detail work. It looks possible, if difficult, to turn *Whole Earth Review* into a profitable magazine, but that would

require change in the way the editorial content is packaged and the altogether-too-informal way things are done. Howard stubbornly resists giving up one particle of editorial control or changing the way he works.

Howard's side of the story: Kelly failed to win my trust and cooperation for his plans. I became convinced that he did not understand the soul of the enterprise. To me, the goal of Point Foundation is to put tools into the hands of people who want to steer their own lives. The business of Point Foundation is to support the cultural mission of the magazine, the catalogs, the events, the online service, and the other projects. We shouldn't look for the projects that would make us more profitable; rather, we should continue looking for the projects with the potential to move the culture, and find ways to afford to do them.

When the idea of writing a book about virtual communities came to me, I knew I had no choice: I felt compelled to do it. So I started talking with Kelly about the future of the magazine. He and I and others discussed ways that it would be possible for me to edit the magazine and work on my book at the same time, but I could not

editors for three consecutive issues and the board and staff would have to agree to live with the consequences of the decision. Stewart also asked my opinion on what should be done about the executive-director slot. I said: "If I could work with somebody who is good at making things possible when orthodox thinking fails — someone like Jon McIntire — I think we could really zoom."

Stewart and I both knew Jon through his work with the Global Business Network. He had managed the Grateful Dead, which was both a turbulently unorthodox and financially successful organization, and he had worked as a domestic violence counselor. He knew how to make big things happen and he knew how to work with creative people within a business framework. So I talked with Jon McIntire, as did several board members.

We were so eager to get Jon aboard that Stewart and I concentrated on selling him on the more attractive parts of the job; Jon, being a rational person, was not very enthusiastic at first. When Stewart mentioned that what Jon could do best for us was to be an "impresario," Jon grew more interested. We now realize that we needed more than an impresario; at the same time, something other than continued financial decline has occurred — the opportunity to create a new Catalog.

Jon came up with a plan for keeping me on as editor and pledged to kick start our other publishing activities. Like Kelly, Jon came in with one strike against him: the financial health of the organization was still declining at an alarming rate. The fact that the organization had survived so many boom-and-bust cycles had induced a dangerous kind of complacency throughout the system. Jon McIntire was now standing on the same tracks where Kelly had been standing when the train came through. And the next train, in the form of a looming financial crisis, was picking up speed.

If it sounds like I am being less harshly realistic about Jon than Kelly, it is because Jon was a friend I helped to talk into taking on an improbable if not impossible job, and who supported my editorial approach every step of the way. I honestly believe that Jon succeeded in thinking big enough

to fulfill his mission as impresario; he didn't do it fast enough, though, and the train came along.

A year after Jon came aboard, the business situation at Whole Earth was as bad as it has ever been. We were able to pay creditors through the early spring of 1993 only because the staff went on half-salary for more than a month. Just as we were really going down the tubes, Jon McIntire returned from a series of meetings with publishers, who had expressed serious interest in doing a big, new Whole Earth Catalog.

WER staff gathered in the kitchen one afternoon, deeply conflicted — the first of many such afternoons. Not all of us agreed that a Catalog was a reasonable thing to do. Keith Jordan, who had the clearest understanding of our cash flow difficulties, was skeptical.

Three days later, we had a book proposal. Jon went back to New York, pitched the proposal personally to editors there and in San Francisco, and positioned us for a book auction. All we needed was another one of those million-dollar advances and our problems would be solved — at least our financial ones.

Although most of us were ready to go for the possibility of a jackpot, at least two old hands were suspicious of the idea. Richard Nilsen had seen previous Catalog advances come and go and was skeptical about whether yet another such infusion would heal the organization. And Keith Jordan, who had spent days and nights trying to figure out how to do the project without sinking the magazine, insisted we would need so much money to produce the Catalog today that there was little hope for a book advance large enough to make a dent in our financial problems. We awaited the book auction, and desperately tried to stay afloat.

At that point, Jon McIntire resigned. His salary was one of the most expensive items on our budget. Just as Kelly had lost the faith of most of the editorial side, Jon had lost the faith of most of the business side. Those of us who were left were faced with deciding what to do about the organization: not only were we missing a CEO, we only had half a board of directors, and the directors who remained were relative

rookies. Doug Carlston had resigned early in 1993, after years of service. By this time, it was clear that we were going to fly on our own or not at all, and at my suggestion, in the spring of 1993, Stewart resigned amicably from the Point Board. When Stewart left, so did Bob Fuller, after years of service. Before he left, Fuller pointed out that the Point Board of Directors had never been intended to be the kind of board that bails out organizations when they hit hard times. I went back and looked at Stewart's statement about the Point Foundation in *Coevolution Quarterly* #2 (Summer 1974), and discovered that Point had been created in order to give away money and have a good time doing it, until the money was gone.

The three remaining Point Board members in the summer of 1993 are Chris Desser, Peggy Lauer and Beau Takahara. All of them came aboard in the past three years.

Financial manager Keith Jordan became increasingly frustrated at the willingness of the editor and others on the editorial side — J. Baldwin, James Donnelly, Lorry Fleming, Kathleen O'Neill, and myself, in particular — to gamble on a project that might sink the magazine financially. My argument was that it looked like the magazine was going to sink anyway unless we did something radical, and we might as well get a Catalog into the world at a time when it is badly needed.

In late May, the staff gathered for one ultimate meeting. We knew when we looked around at each other that we were the people who would decide the fate of the magazine: there was no higher authority at the moment, and the moment was all we had.

We asked Marly Norris to chair the meeting. She had been hired as Jon McIntire's assistant, and Point Board member Chris Desser had asked her to stay on "temporarily" after Jon resigned, to help finish getting out the grant proposals that might help us afford to create the Millennium Whole Earth Catalog. Marly has good communication with both sides of the parking lot, and she seems to remain very calm in uncertain circumstances. She has impressed us with her competence and perseverance.



Marly outlined four scenarios for discussion at this crucial go/no-go meeting. We could decide to put the magazine out of business before we owed our subscribers and other creditors a lot more than we already owed them. We could decide to not do the Catalog but to try to keep the magazine alive as long as possible. We could decide to put the magazine to sleep, do the Catalog, and see what happened next. Or we could do the Catalog, try to keep the magazine alive as long as possible, and hope for a miracle.

Together we agreed that we would try to go with this last option, if the remaining board members felt we could raise the amount of money — it could be as little as \$50,000, as much as \$200,000 — we would need beyond the advance offered by HarperSanFrancisco, the high bidder of the book auction. We also agreed that trying to make our organizational decisions collectively, as we had been attempting to do after Jon's resignation, drained too much time and energy. But we had no money or time to search for yet another executive director — if we could even find a soul sufficiently optimistic or foolhardy to take this hot seat. Managing Editor Lorry Fleming suggested that Marly become a kind of provisional director. We agreed to give it a try. None of us, including Marly, know whether she is going to be up for the task.

And that uncertainty is perhaps a cause for optimism, seen in the context of the expectations that were projected on previous directors. Nobody believes any longer that a knight in armor is going to come along and save us.

Keith Jordan decided that he could not continue trying to be the voice of financial responsibility in an organization that did

not engage in the kind of planning he felt was necessary to keep us going. He resigned. If I could be bold enough to state Keith's position about what was wrong with our plan to do the Catalog and continue putting out the magazine, despite the odds, it would be a word-for-word repeat of what I imagined Kelly would say about me.

Assistant to the Publisher Jayne Stein, Systems and Service Manager Linnea Johnson, Office Manager Nancy Bellaci, and consultant John Skov of J. Skov and Associates are managing the business department now that Keith has left, and are leading it through its time of tran-

sition with grace and fortitude. Assisting them is Carlos Winborn, WER's new customer service clerk.

One of the most recent developments is the most encouraging: we asked for help on the new Catalog from Whole Earth Catalysts in WER #79; the response has been inspiring, gratifying — sustaining. In the first few days after the issue was distributed, I heard via fax and email and paper mail from well-qualified potential domain editors in the fields of rock climbing, water craft, and the Internet. And then the money started arriving. So far, nearly \$27,500 has come in from pledges and donations. We're getting tips on items to review, and we're getting top-quality reviewers. Our network wants this Catalog to happen. That's all we need to know.

We haven't been waiting for all the spreadsheets to balance and all the uncertainties to resolve themselves. Kathleen O'Neill, MWEC art director, and I have been working on ways to make the newest Catalog visually consistent with the ones we love from years past, but clearly fresh and appropriate for the 1990s. The first WEC was pasted up in a garage with X-Acto blades and melted beeswax. Now we have database publishing, desktop publishing, and networked computers. We're looking at ways our new design tools can help us design the Catalog to be an even better tool for readers.

The Whole Earth Catalog is a work of many voices. Many experts in old fields and new ones have much to say. Something interesting has happened: many of the people who were inspired by the first WEC are now veterans, experts, and leaders. In ecological restoration, cultural survival, electronic democracy, community activism, sustainable agriculture, ethnobotany, privacy protection, medical self-help, remote imaging, industrial ecology, self-publishing, desktop video, community-building, and all the other skills we need to survive, thrive, and shape the 1990s, the people who are



leading the most effective efforts in the world are offering their help. They are as thrilled as we are to make it happen again. Big institutions aren't going to make the world work. People are going to make it work. We're going to give them the tools to do so, and take their minds on a journey into the worlds we will need to understand and master in the years ahead.

Veteran WEC editor J. Baldwin, rookie MWEC editor Howard Rheingold, and WER senior editors James Donnelly and Richard Nilsen have culled and argued over and sorted the best of the best reviews and articles from recent publications. Proofreader Hank Roberts and I have been fishing for material from the Internet. Managing editor Lorry Fleming and copy editor Lisa Winer have been helping me organize the stream of correspondence that is already building. Book editor and librarian David Burnor has been ordering books and software. I've been shaping up an outline and recruiting domain editors from previous editions, like Ecology editor Peter Warshall and Livelihood editor Art Kleiner, as well as new ones like Sex-Birth-Death editor Patrizia DiLucchio. We are hunting and gathering the tools we will all need to take independent action, whether that involves knowing how to compost your dinner, encrypt your email, or give your kids sensible information about sex and drugs. We've done it before, but it's all new again, because the world is new again. Public health issues in the AIDS era are important now in ways they weren't prominent before. Cultural survival and preservation of biodiversity are more urgent than they were ten years ago. Intelligent thinking about societal guidance of technological development is increasingly important. Access to tools is no longer enough: we must understand our tools, their impacts, and how to use them in the service of a sustainable civilization.

We all know that the money is a vehicle, that tight budgets can and must be spurs to creativity

and cooperation, that organizational thrashing can offer lessons to be understood, that the goal is to continue finding the tools we all need and putting them together artfully. A Catalog is not just a tool, it's an intellectual adventure in its own right. The old guard and the avant garde have to meet and contend, debate and evaluate, and feel that the task is more than a hard job to do well, but a calling, a mission, a project that must be done because it's the right thing to do. That appears to be happening as naturally and joyfully and magically as it has always happened.

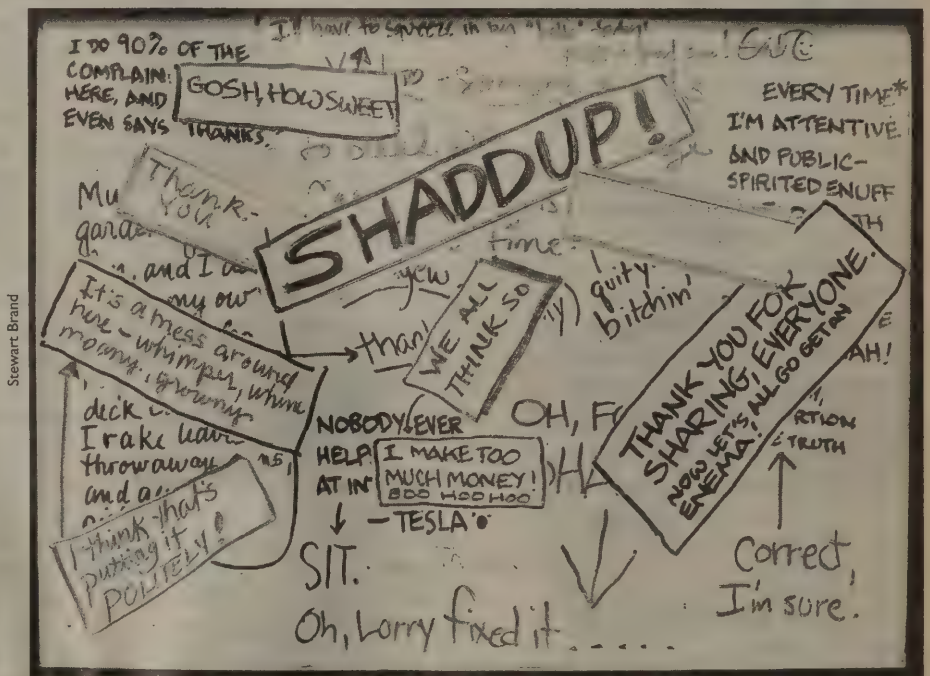
But we have a hard shell separating us from our next level of growth. We're squirming and pecking away at it. Daylight is becoming visible through the missing parts of the system that originally nurtured us. For something old to survive, sometimes something new has to be born. With a little more of your help, we can find the resources to find just a few more generalists who don't mind having their assumptions challenged, to help us all keep this enterprise alive and healthy and growing into the next millennium. The Millennium

Whole Earth Catalog will draw the attention of hundreds of thousands of people to our community, and that's a chance to get a few more to stick with us in our magazine manifestation.

As for the magazine, our first plan is to make a more precise plan out of the elements we have to work with. You can judge the content of the kind of product we can pull together under the circumstances I've just described by reading what you hold in your hand. Some of the changes we are considering involve going to a better grade of paper, publishing a thinner magazine more often, lowering the price. If we can find a way to double our subscription base, we'll have the resources we need to continue doing what we're doing. In future issues, we'll let you know exactly what we plan to do, and how we think we can achieve our goals. The readers' own resources and energy are part of what WER is all about — the most important part, we have discovered. I have no doubt that we'll be hearing from you.

Onward. Further. Embrace errors and return to mountain.

—HLR



Whiteboard from the Point Foundation bathroom. Stewart says this is a sign of too many meetings.

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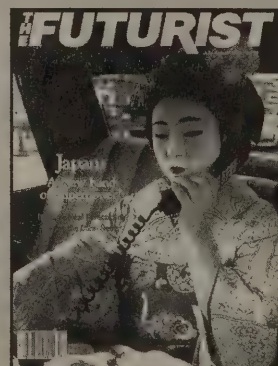
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**Whole Earth Review,**  
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**The Futurist,**  
July-August 1993.



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Edited by John Schaeffer, Real Goods Trading Corporation

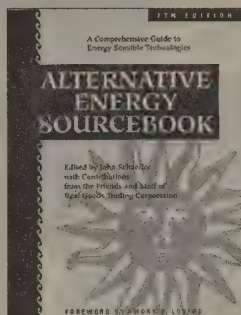
This is more than just a Sears catalog for people seeking energy-sensible technologies. In addition to selling hard-to-find stuff at good prices, it provides honest recommendations and solid information.

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## The World of Zines

(A Guide to the Independent Magazine Revolution)

Mike Gunderloy and Cari Goldberg Janice, editors of Factsheet Five

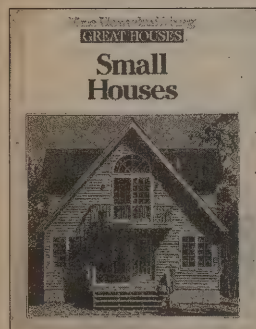
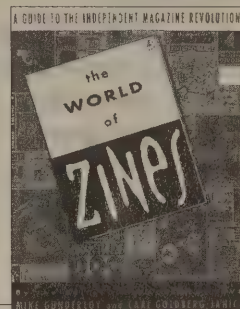
Whole Earth Review has regularly featured Mike and Cari's gleanings from the more than 10,000 small magazines — "zines" — being published today in the US. They have chronicled these publications in the pages of Factsheet Five.

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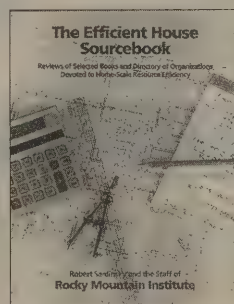
The authors have found ways to build and remodel small houses that don't feel

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Robert Sardinsky and the Rocky Mountain Institute



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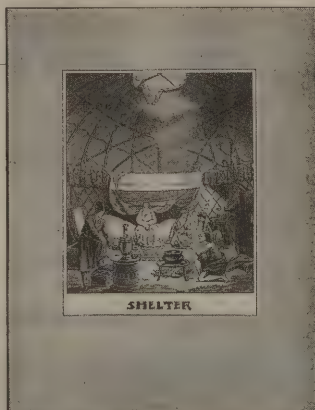
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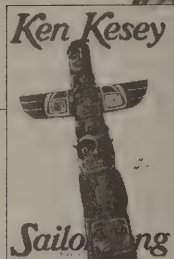
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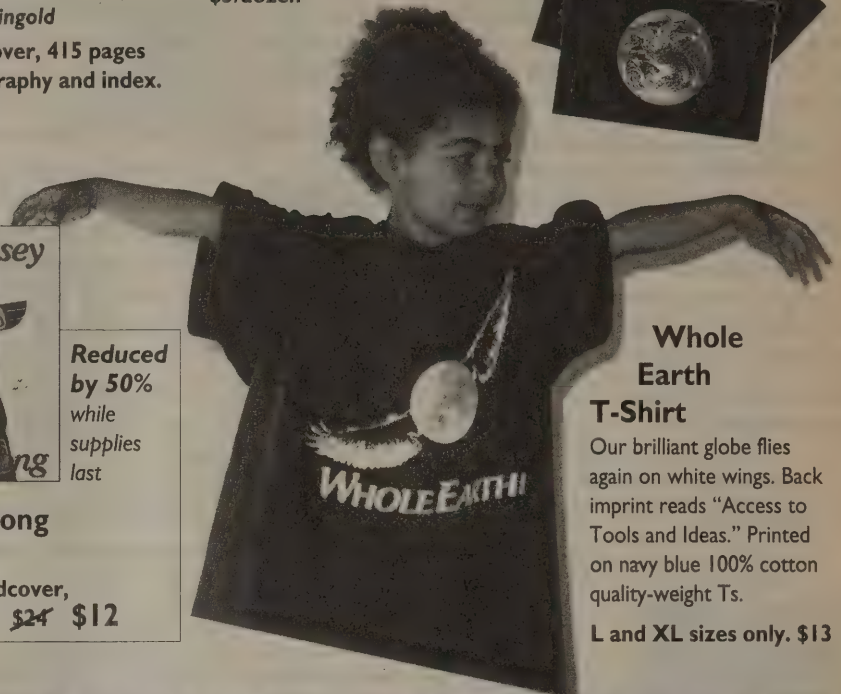
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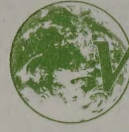


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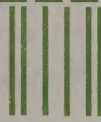
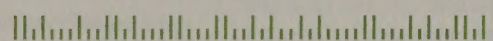
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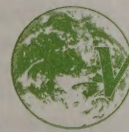
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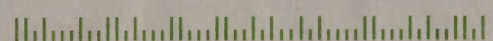
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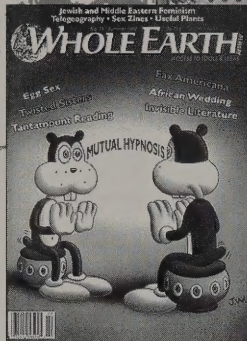
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**79. Summer 1993** — Twenty-fifth Anniversary! Guest-edited by Stewart Brand. Unthinkable futurism from Brian Eno and Kevin Kelly; digital encryption, computer privacy, and electronic money explained; Bruce Sterling, Peter Coyote, Paul Krassner, Donella Meadows, Peter Warshall, Ron Jones, Will Baker. Cover (and other new work) by R. Crumb. **\$7.**

**78. Spring 1993** — Real-Life Women: childbirth tale-tellers, thrift-shop brawlers, leather dykes and hymnists. Romance novels defended; Mark Twain kneecaps Fenimore Cooper; fever dreams in the Himalayas. 1992 index. **\$7.**

**77. Winter 1992** — Kevin Kelly revisits Biosphere 2 on the occasion of its first birthday; a basic guide to corporate environmental responsibility; firearms and Constitutional degradation; teaching the "ineducable" to read; a Mississippi memoir by jd smith. **\$7.**

**76. Fall 1992** — Post-Darwinian evolutionary theory; artificial life, benign and malevolent; redirecting the military and intelligence structures; identifying dysfunction in organizations; the Seva Foundation: the right way to do good; computational chemistry and multipurpose molecules; native American petroglyphs in L.A. County. **\$7.**

**75. Summer 1992** — Empathy, consensus, and consciousness; a crosscultural wedding in Cameroon; spirituality and feminism in Islam and Judaism; Huichol Indian peyoteros and Mayan healing; a Big Sex Section, so to speak; Invisible Literature (a treat for the back-alley semiotician). **\$7.**

**74. Spring 1992** — The Goddess Is Alive: women's wisdom from Z Budapest and Paula Gunn Allen; reviews of pagan zines; reflections of an outlaw volunteer; fighting for the forests: negotiating tactics, tools and resources for forest activists; robot Olympics; Brian Eno on world music; the coevolution of governance; reviews of maps and atlases. **\$7.**

**73. Winter 1991** — Questioning technology: Jerry Mander, Langdon Winner, Howard Levine, Peter Calthorpe, J. Baldwin, Ivan Illich, Amory and Hunter Lovins, William Calvin, and others debate the merits, drawbacks, and outcomes of various technologies. **\$7.**

**72. Fall 1991** — Extending human perception with Nightwalking, lucid dreaming, virtual reality, psychedelics, and Neuro-Tarot; cultural survival of Hawaiians, Mayans, and Tibetans; eldercare; Art Kleiner on corporations. **\$7.**

**71. Summer 1991** — Global and local electronic networking by citizen activists; myths and dreams — interviews with Wendy Doniger and James Hillman; storytelling, from multimedia to native American traditions; "Snake Talk," by Anne Herbert; Lara Owen on menstruation; Ecuadorian shaman Mercedes Mamallacta. **\$7.**

**70. Spring 1991** — A nationwide information and communication network; access to political tools and to poetry; the Gesundheit Institute; do-it-yourself eclipse prediction, by William Calvin; Cyberthon I.O. Plus Wavy Gravy, Will Baker, Robert Bly, Gore Vidal. **\$7.**

**67. Summer 1990** — Biosphere II, an airtight glass ark for eight people and 1,000 species of wildlife; artificial ecology and flocking robots; the solar-powered cottage; a book Stewart Brand won't write; rats as houseguests. **\$7.**

**66. Spring 1990** — Helping Nature Heal: an issue devoted to the nitty-gritty of successfully restoring natural environment, from savannas to old mine pits to forest creeks. Also: a crime lab for animals; being a nonviolent escort in Central America. **\$7.**

**65. Winter 1989** — The Global Teenager, a firsthand report from around the world; the rock'n'roll revolution in the Baltics; how to teach English in Japan; spontaneous healing and miracle cures; a free worldwide computer network. **\$7.**

**62. Spring 1989** — John Todd on applied ecology; a revival of the Goddess; a flourishing cooperative movement in Spain; environmental idealism in Costa Rica; a section on feminist journals; Malcolm Wells, Will Baker, Pliny Fisk III. **\$7.**

**59. Summer 1988** — The rights of robots; neuropeptides and emotion; renting tools; Jay Kinney on the convergence of Far Left and Far Right; a Joseph Campbell primer; Dr. Seuss and social change. **\$7.**

**47. July 1985** — Digital retouching invades the world of photography; J. Baldwin and his highly evolved toolbox; the role of small business in regional recovery, by Robert Rodale; the pro side of clubbing seals. **\$7.**

**45. March 1985** — Viewing environmentalists as part of the problem; the art of recreating meadows; Wendell Berry on Edward Abbey; Anne Herbert on the effectiveness of feeling good; Peter Calthorpe on growing hospitable cities. **\$7.**

**44. Winter 1985** — *CoEvolution Quarterly* becomes *Whole Earth Review*. This "Computers as Poison" issue includes a built-in computer software review section. Also: the miseries of personal computing; visionary fiction by E. M. Forster; Peter Calthorpe on electronic sweatshops. **\$7.**

**43. Fall 1984** — A look at the night sky through civilization's glow; a personal attempt to put Gaian principles into practice; a way to raise indigenous theatre; an uncommon bench by Christopher Alexander. **\$7.**

**39. Fall 1983** — Politics and Religion. Identifying sacred places, by Gary Snyder; Christians involved in radical politics; Mother Teresa and the Nirmal Hriday Home in Calcutta; an acid-rain prevention system. **\$7.**

**38. Summer 1983** — Simple taxes and common-sense government; citizen lobbying; James Lovelock on the Gaia Hypothesis; women's work, women singing, and reflections of a farming woman; Lynda Barry on breaking up with men; the art of altering billboards. **\$7.**

**35. Fall 1982** — Giftgiving as an economics of imagination; Rules of Thumb; Gregory Bateson remembered; language acquisition in animals; how to make yourself understood among Texans; the art of mustanging. 1981 index. **\$7.**

**24. Winter 1979** — How corporate patenting of seeds will cause hundreds of plant species to be lost forever; good solar building designs used throughout history; Gregory Bateson on ending the arms race. **\$7.**

**20. Winter 1978** — Tenth Anniversary. Fifty-six five-minute speeches by such CQ regulars as Theodora Krober, Sam Keen, David Brower, George Leonard, Wavy Gravy, Paolo Soleri, J. Baldwin, Ron Jones, Peter Warshall, etc.; excerpts from Anne Herbert's *Rising Sun Neighborhood Newsletter*. **\$7.**

**12. Winter 1976** — The Watersheds issue. With asides on Christo's Running Fence; interspecies music and Taj Mahal; New Alchemy Institute. Peter Warshall, J. Baldwin, Ron Jones, Roy Rappaport. **\$7.**

☛ *Whole Earth Review* Five-Year Cumulative Index: 1988-1992. Title/subject/author indexes for issues 58 - 77. **\$10 postpaid.**

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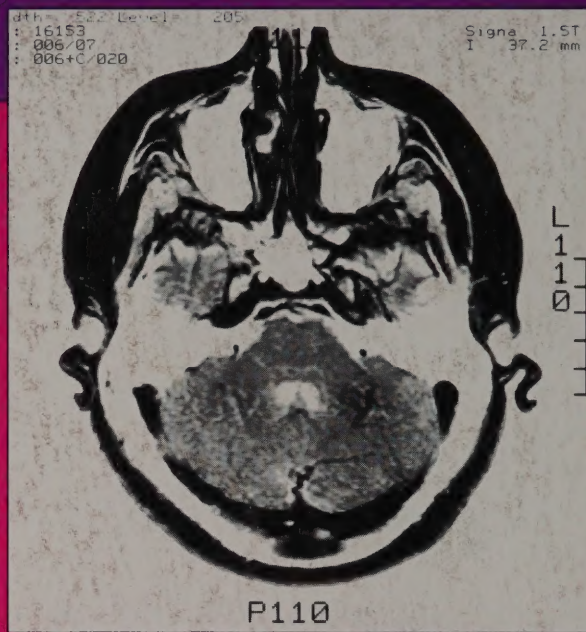
• Issue 27 was *The Next Whole Earth Catalog*; it is not available as a back issue.

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